New enhancements in existing BBPS APIs

Approach Note

Version 1.2

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About this document

This document aims to provide the specifications on the new developments for existing BBPS APIs to incorporate future requirements.

Objective

In our endeavour to enrich bill payments experience and expanding the scope of BBPS to cater to the requirements of the upcoming new categories, BBPS is enhancing the functionalities of existing fetch and payment APIs. Through these new developments in APIs, additional features like bulk fetch and payment, amount configurations for individual bill level, selection element type, etc. is incorporated in existing BBPS APIs.

Proposed Solution

New enhancement in existing BBPS APIs for incorporating new requirements. BBPS APIs will cater to following features:

1. Multiple bills fetch and payment facility through a single BBPS fetch and payment API. This will help to incorporate billers that caters to list of bills for a single customer.
2. Introducing amount configuration at individual bill level. This will enable the biller to define different amount level configuration for each bill item and will facilitate the customers to pay any amount within the range defined by the biller for each bill item.
   Introduced new payment amount configuration as “RANGE” along with EXACT, EXACT_UP and EXACT_DOWN, which enables the billers to configure amount configuration for each bill item as part of BBPS fetch response APIs.
3. Introducing selection element type that will facilitate the COU/AI on how to process the bills on the front-end platforms.
4. Introducing amount multiple feature for each bill item that will specify the COU/AI front end platforms to accept the payment amount for the multiple of certain value only. For E.g.: If Amount Multiple = 100 for a specific bill item as part of BBPS fetch response API, Customer can pay in multiples of 100 only i.e.: 100, 200, 300, …, for that bill item.

Functionalities

New enhancements of existing BBPS APIs will cater to the following functionalities:

Functionality 1: Bulk Fetch and Payment

Introducing multiple bills fetch and payment facility through a single fetch and payment API. This will help to incorporate billers that caters to list of bills for a single customer.

Functionality 2: Amount configuration at individual bill level

Introducing minimum amount and maximum amount attribute for each bill item in the billerResponse element of BBPS fetchResponse API. This will enable the biller to define different amount level configuration for each bill item and will facilitate the customers to pay any amount within the range defined by the biller for each bill item.

Introduced a new payment amount exactness as “RANGE” as part of biller onboarding process, which will enable to biller to utilize this functionality.

Billers configured under “RANGE” payment amount exactness configuration would be able to accommodate for all the scenarios as illustrated below:

	Bill Amount (Rs.)	**Minimum Amount (Rs.)**	**Maximum Amount (Rs.)**	**Use Case**	**Description**
Scenario 1	1000	1000	1000	Biller wants the customer to pay an exact bill amount.	Customers need to pay exact amount of Rs. 1000. No amount editable option available.
Scenario 2	1000	-	2000	Biller wants the customer to pay any amount less than a particular maximum amount.	Customers will be allowed to pay between Rs.0 and Rs. 2000
Scenario 3	1000	500	-	Biller wants the customer to pay any amount more than a particular minimum amount.	Customers will be allowed to pay between Rs.500 and min (maximum limit payment channel, maximum limit payment mode)
Scenario 4	1000	-	-	Biller wants the customer to pay any amount.	Customers will be allowed to pay any amount from Rs.0 to min (maximum limit payment channel, maximum limit payment mode)
Scenario 5	1000	100	2000	Biller wants the customer to pay any amount between a particular set limit.	Customers will be allowed to pay between Rs.100 and Rs.2000

Other considerations:

1. In case the limit is not sent in minimum or maximum parameters, the default limits for payment channel & payment mode would be picked.
2. In case minimum limit sent is lesser than minimum limit of the payment channel / payment mode then the higher value of minimum limit would be selected.

Minimum limit sent by biller – Re.1
Minimum limit of Payment Mode – Rs.5
Minimum limit of Payment Channel – Rs.10
⇨ In this case, minimum limit applicable to payment amount is Rs.10

3. In case maximum limit sent is higher than maximum limit of the payment channel/payment mode then the lower value of maximum limit would be selected.
Maximum limit sent by biller – Rs.1,00,00,001.
Maximum limit of Payment Mode – Rs.1,00,00,000.
Maximum limit of Payment Channel – Rs.50,00,000.
⇨ In this case, maximum limit applicable to payment amount is Rs.50,00,000.

Functionality 3: Amount Multiple for each bill item

Introducing Amount Multiple attribute for each bill item in the billerResponse element of fetchResponse API. Amount Multiple is the minimum denominator value passed by the biller that will specify the COU/AI front end platforms to accept payment only for the multiple of value passed in Amount Multiple attribute.

Various scenarios catering to Amount Multiple attributes are as follows:

Bill Amount (Rs.)	Minimum Amount (Rs.)	Maximum Amount (Rs.)	Amount Multiple (Rs.)	Description
1000	-	-	50	Customer can pay multiple of Rs. 50 (E.g.: 50, 100, 150, etc.) Maximum limit will be min (max limit of payment channel, max limit of payment mode)
1000	-	2000	50	Customer can pay multiple of Rs. 50 (Eg: 50, 100, 150, …., 2000). Maximum limit is Rs. 2000.
1000	201	-	50	Customer can pay multiple of 50. Minimum amount needs to be paid should be more than Rs. 201 (ie: 250). Hence customers can pay Rs. 250, 300, 350, 400, etc. Maximum limit will be min (max limit of payment channel, max limit of payment mode)
1000	201	2000	50	Customer can pay multiple of 50. Minimum amount needs to be paid should be more than Rs.201 (ie: 250). Maximum limit is Rs.2000. Hence customer can pay Rs. 250, 300, 350, 400, …., 2000.

Note: Customer will be allowed to pay only rounded off values and not decimal figures of the value defined in Amount Multiple attribute. Eg: 1x, 2x, 3x, etc.

Functionality 4: Selection Type

Introducing “selectionType” in the BBPS Biller MDM API, which will facilitate the COU/AI on how to process the bills on the front-end platforms.

Selection Type will have following values:

Selection Type	Description
MULTIPLE	Customer can select multiple bills from the list of bills presented on the front-end COU/AI platform. Checkbox selection element.
SINGLE	Customer can select only one bill from the list of bills presented on the front-end COU/AI platform. Radio button selection element.
ALL	Customers will not have the option to select certain bills from the list. Customer must pay all the bills presented on the front-end COU/AI platform

API Changes

BBPS Biller MDM API

Following changes are introduced in BBPS Biller MDM API:

- Introduced a new Enum called **"RANGE"** in Payment Amount Exactness, which defines the minimum and maximum amount range for the billers as a measure of exactness.

  Payment Amount Exactness for the billers will be "RANGE", if the biller wishes to utilize minAmount and maxAmount attribute for the bill item in the billerResponse element as well as in the amount subtags of BBPS fetchResponse API. This will enable the biller to define different amount level configuration for the bill item. This will facilitate the customers to pay any amount within the range defined by the biller for the bill item. For more information, please refer the above "Functionalities" section.

- Introduced **<selectionType> element** in BBPS Biller MDM API that will be applicable if <billerResponseType> is "List". Selection-Type will facilitate the COU/AI front end platform on how to process the list of bills passed in BBPS fetchResponse API. Selection-Type will have 3 values: Multiple, Single, All.

<table>
<tr><th>Element</th><th>Mandatory</th><th>Data Type</th><th>Description</th></tr>
<tr><td>paymentAmountExactness</td><td>CO*</td><td>Enumerated String</td><td>Added new value: "RANGE".</td></tr>
<tr><td>selectionType</td><td>C*</td><td>Enumerated String</td><td>Condition: Only applicable if <billerResponseType> is "List".

Select from the list:
<table>
<tr><th>Values</th><th>Description</th></tr>
<tr><td>MULTIPLE</td><td>Customer can select multiple bills from the list of bills presented on the front-end COU/AI platform</td></tr>
<tr><td>SINGLE</td><td>Customer can select only one bill from the list of bills presented on the front-end COU/AI platform</td></tr>
<tr><td>ALL</td><td>Customers will not the option to select certain bills from the list. Customer must pay all the bills presented on the front-end COU/AI platform</td></tr>
</table></td></tr>
</table>

* C stands for Conditional in the above table. CO stands for Conditional Optional in the above table.

API Sample

For the billers configured as <billerResponseType> as "Single"

If <billerResponseType> is "Single", then biller can send only one billerResponse block as part of the BBPS fetch response API. Hence, only 1 bill item can be forwarded at a time by the biller.

<billerResponseType>SINGLE</billerResponseType>
<paymentAmountExactness>RANGE<paymentAmountExactness>

For the billers configured as <billerResponseType> as "List"

If <billerResponseType> is "List", then biller can send list of billerResponse blocks as part of the BBPS fetch response API. Hence, multiple bills can be forwarded by the biller at a time.

<billerResponseType>LIST</billerResponseType>
<paymentAmountExactness>RANGE<paymentAmountExactness>
<selectionType>SINGLE</ selectionType >

BBPS Bill Fetch Response API

1. 4 new attributes added as part of the <billerResponse> element in BBPS Fetch Response API.
2. 3 new attributes added as part of the <billerResponse.Tag> element in BBPS Fetch Response API.

The various parameters are explained below				
Element	**Attribute**	**Mandatory**	**Data Type**	**Description**
List of billerResponse element				
billerResponse	label	CO*	Alphanumeric	Min Length – 1, Max Length – 100 Header name for the individual <billerResponse> element
	minAmount	CO*	Numeric	Condition: Only applicable if <paymentAmountExactness> is "RANGE". Minimum amount that can be paid by the customer. Value will be in Paisa Format.
	maxAmount	CO*	Numeric	Condition: Only applicable if <paymentAmountExactness> is "RANGE". Maximum amount that can be paid by the customer. Value will be in Paisa Format.
	amountMultiple	CO*	Numeric	Condition: Only applicable if <paymentAmountExactness> is "RANGE". The input amount by the customer should be a numeric multiple of the value defined in "amountMultiple" Value will be in Paisa Format.
billerResponse.Tag	minAmount	CO*	Numeric	Condition: Only applicable if <billerResponseType> is "Single" and <paymentAmountExactness> is "RANGE". Minimum amount that can be paid by the customer. Value will be in Paisa Format.
	maxAmount	CO*	Numeric	Condition: Only applicable if <billerResponseType> is "Single" and <paymentAmountExactness> is "RANGE". Maximum amount that can be paid by the customer. Value will be in Paisa Format.
	amountMultiple	CO*	Numeric	Condition: Only applicable if <billerResponseType> is "Single" and <paymentAmountExactness> is "RANGE".

				The input amount by the customer should be a numeric multiple of the value defined in "amountMultiple" Value will be in Paisa Format.

*CO stands for Conditional Optional in the above table.

billerResponse.Tag is utilized to define amount subtags. Please refer BBPS-API-Specifications-v14.0 document → "Amount Block Configuration in Bill Fetch & Bill Payment Messages", pg 101 for detailed understanding on the functioning of amount subtags.

API Sample

For the billers configured as <billerResponseType> as "Single"

<BillerResponse label= "ABC123" customerName="Jon Jacobs" amount="20000" billNumber="12303010" billPeriod="Sept" minAmount = "10000" maxAmount = "40000" amountMultiple = "500">

<Tag name="ABC" minAmount="10000" maxAmount="20000" amountMultiple="5000"/>

<BillerResponse/>

For the billers configured as <billerResponseType> as "List"

<BillerResponse label = "ABC" customerName="Jon Jacobs" amount="15000" dueDate="2023-01-15" minAmount="2500" maxAmount = "20000" amountMultiple = "5000" billNumber="12301"/>

<BillerResponse label = "ABC123" customerName="Jon Jones" amount="15000" dueDate="2023-01-15" minAmount="2500" maxAmount = "20000" amountMultiple = "5000" billNumber="12302"/>

Note:

- "billNumber" is mandatory if <billerResponseType> is "List".
- Values of "billNumber" attribute will be unique.

BBPS Payment Request API

- Added 3 additional attributes in <Amount.Tag> element: "minAmount", "maxAmount", "amountMultiple".
- Added new element <AmountBreakUp>, that will be a child element of <Amount> block in BBPS Payment Request API.
- Added new element <BillAmt>, that will be a child element of <AmountBreakUp> element in BBPS Payment Request API.
- Added 2 new attributes in <BillAmt> element: "billNumber" and "Amount". BillNumber corresponds to the "billerNumber" attribute of "BillerResponse" element of BBPS Fetch Response API for which the payment was done. "Amount" attribute corresponds to the amount that is paid by the customer for the respective "billNumber" attribute.

The various parameters are explained below				
Element	**Attribute**	**Mandatory**	**Data Type**	**Description**
Amount.Tag	minAmount	CO*	Numeric	Condition: Only applicable if <billerResponseType> is "Single" and <paymentAmountExactness> is "RANGE".

				Same as “minAmount” attribute of <billerResponse.Tag> element passed in fetch response API
	maxAmount	CO*	Numeric	Condition: Only applicable if <billerResponseType> is “Single” and <paymentAmountExactness> is “RANGE”. Same as “maxAmount” attribute of <billerResponse.Tag> element passed in fetch response API
	amountMultiple	CO*	Numeric	Condition: Only applicable if <billerResponseType> is “Single” and <paymentAmountExactness> is “RANGE”. Same as “amountMultiple” attribute of <billerResponse.Tag> element passed in fetch response API
List of <Amount.AmountBreakUp.BillAmt> element				
Amount.AmountBreakUp.BillAmt	billNumber	C*	Alphanumeric	Condition: Only applicable if <billerResponseType> is “List” Min Length – 1, Max Length – 100 billNumber corresponds to the “billerNumber” attribute of “BillerResponse” element for which the payment was done
	Amount	C*	Numeric	Condition: Only applicable if <billerResponseType> is “List”. Amount paid by the customer for the respective “billNumber”. Value will be in Paisa Format.

* C stands for Conditional in the above table. CO stands for Conditional Optional in the above table.

Note: Amount.Tag is utilized for amount subtags. Please refer BBPS-API-Specifications-v14.0 document → “Amount Block Configuration in Bill Fetch & Bill Payment Messages”, pg 101 for detailed understanding on the functioning of amount subtags.

API Sample

For the billers configured as <billerResponseType> as “Single”

```
<Amount>
        <Amt COUcustConvFee="0" amount="10000" currency="356" custConvFee="0"/>
        <Tag name="ABC" value=”10000” minAmount="10000" maxAmount="20000"
        amountMultiple = “5000” />
</Amount>
```

For the billers configured as <billerResponseType> as “List”

```
<Amount>
        <Amt amount="40000" custConvFee="0" currency="356" COUcustConvFee="0"/>
        <AmountBreakUp>
                <BillAmt billNumber="12301" Amount="10000"/>
```

```
            <BillAmt billNumber="12303" Amount="30000"/>
        </AmountBreakUp>
</Amount>
```

Note:

- <BillerResponse> element will not be passed in BBPS Payment Request API if <billerResponseType> is “List”.
- “amount” attribute as part of <Amt> element, will be sum of the “Amount” attribute of individual <BillAmt> element.

BBPS Payment Response API/402 API

API Sample

For the billers configured as <billerResponseType> as “Single”

No API change in BBPS Payment Response API.

For the billers configured as <billerResponseType> as “List”

List of <billerResponse> element will contain “amount” and “billNumber” attribute. Only the bills paid by the customer will be part of <billerResponse> element.

```
<BillerResponse amount="10000" billNumber="12301" custConvFee="0" />
<BillerResponse amount="30000" billNumber="12303" custConvFee="0" />
```

Note:

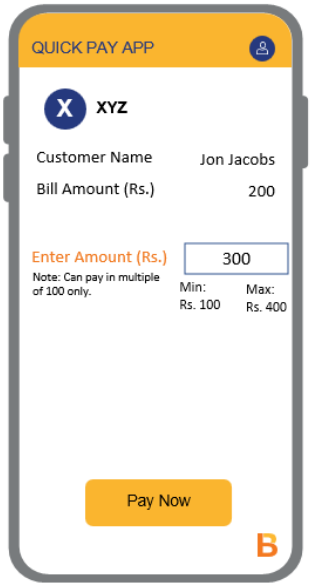
- <BillerResponse> element will contain the information of the bills paid by the customer. Hence, “amount” and “billNumber” combination of payment response API should be equal to “amount” and “billNumber” combination as part of the payment request API.
- **After initiating the payment, if the status of a single bill fails, then all the other bills associated with that payment request API will also fail.**

Use Cases

1. Biller Response Type = “Single”, Payment Amount Exactness = “Range”, without Amount Subtags

For which type of biller	Billers for which there is single bill item for each customer. Biller will be able to configure minimum permissible amount, maximum permissible amount, or amount multiple value specific to each fetch request API.
Customer user journey	Customer will be able to pay the displayed bill as per the amount validation defined by the biller.
APIs (Only included the relevant tags)	
BBPS Biller MDM API	*<bill.erResponseType>SINGLE</billerResponseType>* *<paymentAmountExactness>RANGE<paymentAmountExactness>*
BBPS Fetch Response API	- minAmount, maxAmount, and amountMultiple are optional attribute based on the requirement of the biller *<BillerResponse customerName="Jon Jacobs" amount="20000" billNumber="12303010" billPeriod="Sept" minAmount = “10000” maxAmount = “40000” amountMultiple="10000" />* - Bill amount is Rs. 200. Minimum permissible amount is Rs. 100. Maximum permissible amount is Rs. 400. - Customer can pay in multiple of Rs. 100 only. Hence, permissible amount will be Rs. 100, 200, 300, 400.
BBPS Payment Request API	- The checksum from the BillerResponse in the Fetch Response API will also be included in the Payment Request API, and it should be the same as fetch response API. *<BillerResponse customerName="Jon Jacobs" amount="20000" billNumber="12303010" billPeriod="Sept" minAmount = “10000” maxAmount = “40000” amountMultiple="10000" />* - The Amount Tag will contain Amt with due amount as amount attribute. *<Amount>* *<Amt COUcustConvFee="0" amount="30000" currency="356" custConvFee="0"/>* *</Amount>* **Validation:** - BBPS CU to check whether customer payment amount falls within the minimum permissible amount and maximum

	permissible amount defined by the biller. Else the transaction will be rejected. - Ous to perform amount multiple validation.
BBPS Payment Response API / 402 Response API	- Payment Response API will contain BillDetails and BillResponse Tag that was passed in Bill Payment request. *<BillerResponse customerName="Jon Jacobs" amount="30000" billNumber="12303010" billPeriod="Sept" />*



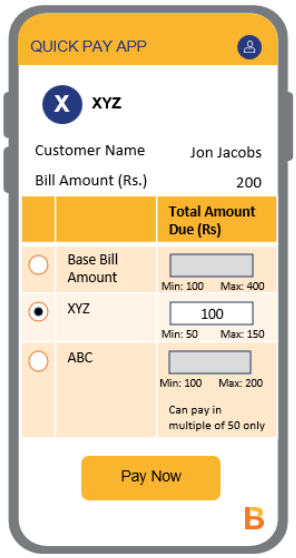
User Journey:

1. Customer will select the category and biller
2. Customer will enter the unique parameter
3. As part of BBPS fetch response API, biller will pass the necessary information (Customer name, Bill Amount, Minimum / Maximum Permissible Amount, Amount Multiple, etc)
4. Necessary amount validation (Minimum / Maximum permissible amount, amount multiple) should be in place at the front-end applications
5. Customer will verify the information, enter the amount, and proceed to payment.

2. Biller Response Type = “Single”, Payment Amount Exactness = “Range”, with Amount Subtags

For which type of biller	Billers for which there is single bill item for each customer, but there are multiple amount options/subtags with respective to the bill item. For eg: For electricity category, there is Early Payment Amount, Late Payment Amount, along with the bill amount. Please refer *BBPS-API-Specifications-v14.0 document → “Amount Block Configuration in Bill Fetch & Bill Payment Messages”, pg 101 for detailed understanding on amount subtags* Biller will be able to configure minimum permissible amount, maximum permissible amount, or amount multiple value specific to a bill item, as well as to each amount subtags defined.
Customer user journey	Customer will be able to pay the displayed bill, or choose from the amount subtags as per the amount validation defined by the biller.
APIs (Only included the relevant tags)	
BBPS Biller MDM API	*<billerResponseType>SINGLE</billerResponseType>* *<paymentAmountExactness>RANGE<paymentAmountExactness>*
BBPS Fetch Response API	• minAmount, maxAmount, and amountMultiple are optional attribute based on the requirement of the biller *<BillerResponse customerName="Jon Jacobs" amount="20000" billNumber="12303010" billPeriod="Sept" minAmount = “10000” maxAmount = “40000” >* *<Tag name="XYZ" minAmount="5000" maxAmount="15000" />* *<Tag name="ABC" minAmount="10000" maxAmount="20000" amountMultiple="5000"/>* *<BillerResponse/>* *"amountOptions":[{"amountBreakupSet":["BASE_BILL_AMOUNT"]}, {"amountBreakupSet":["XYZ"]}, {"amountBreakupSet":["ABC"]}]* • Based on the above amount breakup set configuration, customer can either pay base bill amount, XYZ, or ABC. Above amount breakup set configuration may vary based on the requirement of the biller. • Bill amount is Rs. 200. Minimum permissible amount is Rs. 100. Maximum permissible amount is Rs. 400. • Customer can also choose to pay XYZ, with minimum permissible amount as Rs. 50, and maximum permissible amount as Rs. 150.

	• Customer can also choose to pay ABC, with minimum permissible amount as Rs. 100, and maximum permissible amount as Rs. 200. Customer will be able to pay in multiple of Rs. 50 only. Hence, permissible amount will be Rs. 50, 100, 150, 200.
BBPS Payment Request API	• The checksum from the BillerResponse in the Fetch Response API will also be included in the Payment Request API, and it should be the same as fetch response API. *<BillerResponse customerName="Jon Jacobs" amount="20000" billNumber="12303010" billPeriod="Sept" minAmount = "10000" maxAmount = "40000" > <Tag name="XYZ" minAmount="5000" maxAmount="15000" /> <Tag name="ABC" minAmount="10000" maxAmount="20000" amountMultiple="5000"/> </BillerResponse>* • The Amount Tag will contain Amt with due amount as amount attribute. • If the <Amount> Tag contains <Amt> tag along with one of the below <Tag> then that tag will be considered for payment *<Amount> <Amt COUcustConvFee="0" amount="10000" currency="356" custConvFee="0"/> <Tag name="XYZ" value="10000" minAmount="5000" maxAmount="15000" /> </Amount>* *Here, customer has paid XYZ Rs. 100* **Validation:** • BBPS CU to check whether customer payment amount falls within the minimum permissible amount and maximum permissible amount defined by the biller. Else the transaction will be rejected • Ous to perform amount multiple validation.
BBPS Payment Response API / 402 Response API	• Payment Response API will contain BillDetails and BillResponse Tag that was passed in Bill Payment request. *<BillerResponse customerName="Jon Jacobs" amount="10000" billNumber="12303010" billPeriod="Sept" />*



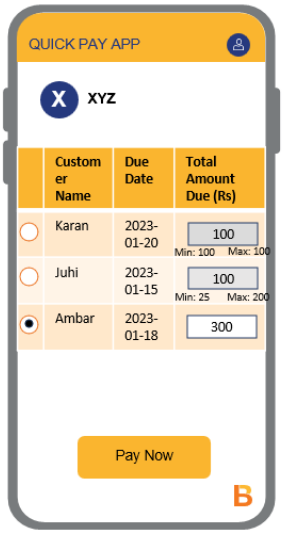
User Journey:

1. Customer will select the category and biller
2. Customer will enter the unique parameter
3. As part of BBPS fetch response API, biller will pass the necessary information (Customer name, Bill Amount, Minimum / Maximum Permissible Amount, Amount Multiple, etc), inclusive of amount options as defined by the biller as part of biller MDM
4. Necessary amount validation (Minimum / Maximum permissible amount, amount multiple) should be in place at the front-end applications
5. Customer will verify the information, enter the amount, and proceed to payment.

3. Biller Response Type = “List”, Payment Amount Exactness = “Range”, Selection Type = “Single”

For which type of biller	Billers for which there are list of bill items for each customer, but biller wants the customers to pay only one bill from all the bill items. Biller will be able to configure minimum permissible amount, maximum permissible amount, or amount multiple value specific to each bill items.
Customer user journey	Customer will be able to view the information related to all the bill items, customer will be able to select only 1 bill item from the list of bills (Radio selection element) and proceed to payment.
APIs (Only included the relevant tags)	
BBPS Biller MDM API	*<billerResponseType>LIST</billerResponseType>* *<paymentAmountExactness>RANGE<paymentAmountExactness>* *<selectionType>SINGLE</ selectionType >*
BBPS Fetch Response API	• label, minAmount, maxAmount, and amountMultiple are optional attribute based on the requirement of the biller *<BillerResponse label = “XYZ” customerName="Karan" amount="10000" dueDate="2023-01-20" minAmount="10000" maxAmount = “10000” billNumber="12301"/>* *<BillerResponse label = “ABC” customerName="Juhi" amount="15000" dueDate="2023-01-15" minAmount="2500" maxAmount = “20000” amountmultiple = “5000” billNumber="12302"/>* *<BillerResponse label = “MNP” customerName="Ambar" amount="25000" dueDate="2023-01-18" billNumber="12303"/>* • Details of the list of bills ▪ Bill 1: Bill amount is Rs. 100, minimum permissible amount and maximum permissible amount is Rs. 100. Hence, it will be an exact configuration where customer has to pay Rs. 100. No amount editable option available ▪ Bill 2: Bill amount is Rs. 150, minimum permissible amount is Rs. 25 and maximum permissible amount is Rs. 100. Customer will be able to pay in multiple of Rs. 50 only. Hence, permissible amount will be Rs. 50, 100, 150. ▪ Bill 3: Bill amount is Rs. 250. Since there is no minimum permissible amount and maximum permissible amount defined, customer can pay any amount (Adhoc configuration) • Since selectionType is “Single”, customer can select only one bills out of the list of 3 bills.

BBPS Payment Request API	• <BillerResponse> element will not be passed as part of payment request API • <AmountBreakUp> element will contain the details of all the bills for which the customer has done the payment. • "amount" attribute in the <Amt> element will be the summation of all the "amount" attribute in the <AmountBreakUp> element. *<Amount>* *<Amt amount="30000" custConvFee="0" currency="356" COUcustConvFee="10"/>* *<AmountBreakUp>* *<BillAmt billNumber="12303" Amount="30000"/>* *</AmountBreakUp>* *</Amount>* **Validation:** • Validation in place by OUs to check whether customer payment amount falls within the minimum permissible amount and maximum permissible amount defined by the biller for that particular bill item. • Ous to perform amount multiple validation if any. • Ous to perform validation to allow only one bill payments from the list of bills presented, if selectionType is "Single".
BBPS Payment Response API / 402 Response API	List of <billerResponse> element will only contain "amount" and "billNumber" attribute. Only the bills paid by the customer will be part of <billerResponse> element. *<BillerResponse amount="30000" billNumber="12303"/>*



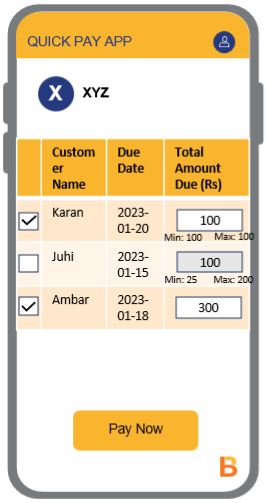
User Journey:

1. Customer will select the category and biller
2. Customer will enter the unique parameter
3. As part of BBPS fetch response API, biller will pass the necessary information (list of bill items each consisting of customer name, Bill Amount, Minimum / Maximum Permissible Amount, Amount Multiple, etc).
4. Since selection type is "Single", customer will be able to pay only one bill item.
5. Necessary amount validation (Minimum / Maximum permissible amount, amount multiple) should be in place for each bill items at the front-end applications for each bill item.
6. Customer will verify the information, enter the amount, and proceed to payment.

4. Biller Response Type = “List”, Payment Amount Exactness = “Range”, Selection Type = “Multiple”

For which type of biller	Billers for which there are list of bill items for each customer, and biller wants the customer to pay multiple bill items from the list of bill items. Biller will be able to configure minimum permissible amount, maximum permissible amount, or amount multiple value specific to each bill items.
Customer user journey	Customer will be able to view the information related to all the bill items, customer will be able to choose the bill items from the list of bills (Checkbox selection element) and proceed to payment.
APIs (Only included the relevant tags)	
BBPS Biller MDM API	*<billerResponseType>LIST</billerResponseType>* *<paymentAmountExactness>RANGE<paymentAmountExactness>* *<selectionType>MULTIPLE</selectionType>*
BBPS Fetch Response API	• label, minAmount, maxAmount, and amountMultiple are optional attribute based on the requirement of the biller *<BillerResponse label = “XYZ” customerName="Karan" amount="10000" dueDate="2023-01-20" minAmount="10000" maxAmount = “10000” billNumber="12301"/>* *<BillerResponse label = “ABC” customerName="Juhi" amount="15000" dueDate="2023-01-15" minAmount="2500" maxAmount = “20000” amountmultiple = “5000” billNumber="12302"/>* *<BillerResponse label = “MNP” customerName="Ambar" amount="25000" dueDate="2023-01-18" billNumber="12303"/>* • Details of the list of bills ▪ Bill 1: Bill amount is Rs. 100, minimum permissible amount and maximum permissible amount is Rs. 100. Hence, it will be an exact configuration where customer has to pay Rs. 100. No amount editable option available ▪ Bill 2: Bill amount is Rs. 150, minimum permissible amount is Rs. 25 and maximum permissible amount is Rs. 100. Customer will be able to pay in multiple of Rs. 50 only. Hence, permissible amount will be Rs. 50, 100, 150. ▪ Bill 3: Bill amount is Rs. 250. Since there is no minimum permissible amount and maximum permissible amount defined, customer can pay any amount (Adhoc configuration) • Since selectionType is “Multiple”, customer can select multiple bills out of the list of 3 bills.

BBPS Payment Request API	• <BillerResponse> element will not be passed as part of payment request API • <AmountBreakUp> element will contain the details of all the bills for which the customer has done the payment. • "amount" attribute in the <Amt> element will be the summation of all the "amount" attribute in the <AmountBreakUp> element. *<Amount>* *<Amt amount="40000" custConvFee="0" currency="356" COUcustConvFee="0"/>* *<AmountBreakUp>* *<BillAmt billNumber="12301" Amount="10000"/>* *<BillAmt billNumber="12303" Amount="30000"/>* *</AmountBreakUp>* *</Amount>* **Validation:** • Validation in place by OUs to check whether customer payment amount falls within the minimum permissible amount and maximum permissible amount defined by the biller for that particular bill item. • Ous to perform amount multiple validation if any. • Ous to perform validation to allow multiple bill payments from the list of bills presented, if selectionType is "Multiple".
BBPS Payment Response API / 402 Response API	List of <billerResponse> element will only contain "amount" and "billNumber" attribute. Only the bills paid by the customer will be part of <billerResponse> element. *<BillerResponse amount="10000" billNumber="12301"/>* *<BillerResponse amount="30000" billNumber="12303"/>*



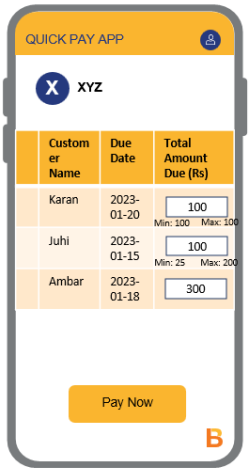
User Journey:

1. Customer will select the category and biller
2. Customer will enter the unique parameter
3. As part of BBPS fetch response API, biller will pass the necessary information (list of bill items each consisting of customer name, Bill Amount, Minimum / Maximum Permissible Amount, Amount Multiple, etc).
4. Since selection type is "Multiple", customer will be able to select multiple bills out of the list of bills.
5. Necessary amount validation (Minimum / Maximum permissible amount, amount multiple) should be in place for each bill items at the front-end applications for each bill item.
6. Customer will verify the information, enter the amount, and proceed to payment.

5. Biller Response Type = “List”, Payment Amount Exactness = “Range”, Selection Type = “All”

For which type of biller	Billers for which there are list of bill items for each customer, and biller wants the customer to pay all the bill items from the list of bill items. Biller will be able to configure minimum permissible amount, maximum permissible amount, or amount multiple value specific to each bill items.
Customer user journey	Customer will be able to view the information related to all the bill items, customer will have to pay all the bills from the list of bills
APIs (Only included the relevant tags)	
BBPS Biller MDM API	*<billerResponseType>LIST</billerResponseType>* *<paymentAmountExactness>RANGE<paymentAmountExactness>* *<selectionType>ALL</selectionType>*
BBPS Fetch Response API	• label, minAmount, maxAmount, and amountMultiple are optional attribute based on the requirement of the biller *<BillerResponse label = “XYZ” customerName="Karan" amount="10000" dueDate="2023-01-20" minAmount="10000" maxAmount = “10000” billNumber="12301"/>* *<BillerResponse label = “ABC” customerName="Juhi" amount="15000" dueDate="2023-01-15" minAmount="2500" maxAmount = “20000” amountmultiple = “5000” billNumber="12302"/>* *<BillerResponse label = “MNP” customerName="Ambar" amount="25000" dueDate="2023-01-18" billNumber="12303"/>* • Details of the list of bills ▪ Bill 1: Bill amount is Rs. 100, minimum permissible amount and maximum permissible amount is Rs. 100. Hence, it will be an exact configuration where customer has to pay Rs. 100. No amount editable option available ▪ Bill 2: Bill amount is Rs. 150, minimum permissible amount is Rs. 25 and maximum permissible amount is Rs. 100. Customer will be able to pay in multiple of Rs. 50 only. Hence, permissible amount will be Rs. 50, 100, 150. ▪ Bill 3: Bill amount is Rs. 250. Since there is no minimum permissible amount and maximum permissible amount defined, customer can pay any amount (Adhoc configuration) • Since selectionType is “All”, customer will have to pay all the 3 bills.
BBPS Payment Request API	• <BillerResponse> element will not be passed as part of payment request API

	• <AmountBreakUp> element will contain the details of all the bills for which the customer has done the payment. • "amount" attribute in the <Amt> element will be the summation of all the "amount" attribute in the <AmountBreakUp> element. *<Amount>* *<Amt amount="50000" custConvFee="0" currency="356" COUcustConvFee="0"/>* *<AmountBreakUp>* *<BillAmt billNumber="12301" Amount="10000"/>* *<BillAmt billNumber="12302" Amount="10000"/>* *<BillAmt billNumber="12303" Amount="30000"/>* *</AmountBreakUp>* *</Amount>* **Validation:** • Validation in place by OUs to check whether customer payment amount falls within the minimum permissible amount and maximum permissible amount defined by the biller for that particular bill item. • Ous to perform amount multiple validation if any. • Ous to perform validation to allow customer to pay all the bills presented if selectionType is "All".
BBPS Payment Response API / 402 Response API	List of <billerResponse> element will only contain "amount" and "billNumber" attribute. Only the bills paid by the customer will be part of <billerResponse> element. *<BillerResponse amount="10000" billNumber="12301"/>* *<BillerResponse amount="10000" billNumber="12302"/>* *<BillerResponse amount="30000" billNumber="12303"/>*



User Journey:

1. Customer will select the category and biller
2. Customer will enter the unique parameter
3. As part of BBPS fetch response API, biller will pass the necessary information (list of bill items each consisting of customer name, Bill Amount, Minimum / Maximum Permissible Amount, Amount Multiple, etc).
4. Since selection type is "All", customer will have to pay all the bills presented.
5. Necessary amount validation (Minimum / Maximum permissible amount, amount multiple) should be in place for each bill items at the front-end applications for each bill item.
6. Customer will verify the information, enter the amount, and proceed to payment.

6. Biller Response Type = “List”, Payment Amount Exactness = “Exact” / “Exact_up” / “Exact_down” / “Adhoc”, Selection Type = “Single” / “Multiple” / “All”.

For which type of biller	Billers for which there are list of bill items for each customer, and every bill items will correspond to same payment amount configuration. Since every bill item will be configured for the same payment amount configuration (Exact / Exact down / Exact up / Adhoc) defined at the time of bill onboarding, biller will not be able to configure minimum permissible amount, maximum permissible amount, or amount multiple value specific to each bill items. Biller can utilize selection type to specify how the bills will be processed at the front-end applications.
Customer user journey	Customer will be able to view the information related to all the bill items, and customers can choose to pay the bills as per the selectionType defined by the biller.
APIs (Only included the relevant tags)	
BBPS Biller MDM API	*<billerResponseType>LIST</billerResponseType>* *<billerAcceptsAdhoc>false</billerAcceptsAdhoc>* *<paymentAmountExactness>Exact<paymentAmountExactness>* *<selectionType>ALL</selectionType>*
BBPS Fetch Response API	• *minAmount, maxAmount, amtmultiple attribute cannot be utilized if payment amount configuration is “Exact” / “Exact_up” / “Exact_down”* *<BillerResponse customerName="Karan" amount="10000" dueDate="2023-01-20" billNumber="12301"/>* *<BillerResponse customerName="Juhi" amount="15000" dueDate="2023-01-15" billNumber="12302"/>* *<BillerResponse customerName="Ambar" amount="25000" dueDate="2023-01-18" billNumber="12303"/>* • Details of the list of bills ▪ Bill 1: Bill amount is Rs. 100 ▪ Bill 2: Bill amount is Rs. 150 ▪ Bill 3: Bill amount is Rs. 250. • Since selectionType is “All”, customer will have to pay all the 3 bills. • Since paymentAmountExactness is “Exact”, all the bill items will be exact amount configuration. Hence, customer cannot edit the bill amount.

BBPS Payment Request API	• <BillerResponse> element will not be passed as part of payment request API. • <AmountBreakUp> element will contain the details of all the bills for which the customer has done the payment. • "amount" attribute in the <Amt> element will be the summation of all the "amount" attribute in the <AmountBreakUp> element. *<Amount>* *<Amt amount="50000" custConvFee="0" currency="356" COUcustConvFee="0"/>* *<AmountBreakUp>* *<BillAmt billNumber="12301" Amount="10000"/>* *<BillAmt billNumber="12302" Amount="15000"/>* *<BillAmt billNumber="12303" Amount="25000"/>* *</AmountBreakUp>* *</Amount>* **Validation:** • OUs to perform necessary validation on the permissible amount for each bill items based on the payment amount configuration defined. • OUs to perform necessary validation to allow the payments of the bill items as per the "selectionType" defined.
BBPS Payment Response API / 402 Response API	List of <billerResponse> element will only contain "amount" and "billNumber" attribute. Only the bills paid by the customer will be part of <billerResponse> element. *<BillerResponse amount="10000" billNumber="12301"/>* *<BillerResponse amount="15000" billNumber="12302"/>* *<BillerResponse amount="25000" billNumber="12303"/>*

Summary on API Changes

For the billers configured as <billerResponseType> as "Single"

- 4 new attributes added as part of the <billerResponse> element in BBPS Fetch Response API. Attributes added are **"label","minAmount","maxAmount","amountMultiple".**
- 3 new attributes added as part of the <billerResponse.Tag> element in BBPS Fetch Response API. Attributes added are **"minAmount","maxAmount","amountMultiple".**
- Introduced a new enum called **"RANGE"** in <PaymentAmountExactness> element in BBPS Biller MDM API, which defines the minimum and maximum amount range for Billers as a measure of exactness.
- Added 3 additional attributes in <Amount.Tag> element in BBPS Payment Request API. Attributes added are **"minAmount","maxAmount","amountMultiple".**

For the billers configured as <billerResponseType> as "List"

- 4 new attributes added as part of the <billerResponse> element in BBPS Fetch Response API. Attributes added are **"label","minAmount","maxAmount","amountMultiple".**
- Added **<selectionType> element** in BBPS Biller MDM API that will be applicable for list of bills passed in BBPS fetchResponse API. Selection-Type will facilitate the COU/AI front end platform on how to process the list of bills passed in BBPS fetchResponse API. Selection-Type will have 3 values: Multiple, Single, All. Selection-Type is only applicable if <billerResponseType> is "List".
- Introduced a new enum called **"RANGE"** in <PaymentAmountExactness> element in BBPS Biller MDM API, which defines the minimum and maximum amount range for Billers as a measure of exactness.
- <BillerResponse> element will not be passed as part of BBPS payment request API.
- Added new element **<AmountBreakUp>**, that will be a child element of <Amount> block in BBPS Payment Request API.
- Added new element **<BillAmt>**, that will be a child element of <AmountBreakUp> element in BBPS Payment Request API.
- Added 2 new attributes in <BillAmt> element: **"billNumber" and "Amount".** BillNumber corresponds to the "billerNumber" attribute of "BillerResponse" element of BBPS Fetch Response API for which the payment was done. "Amount" attribute corresponds to the amount that is paid by the customer for the respective "billNumber" attribute.
- Only the bills paid by the customer will be part of <billerResponse> element in BBPS Payment Response API.

Checklist from the COU / BOU side

- Comply with BBPS enhancement no. 14 to enable BBPS APIs new enhancement. Request to get in touch with BBPS Certification Team to initiate the integration.
- For COUs to identify whether the biller is consuming BBPS APIs new enhancement, either of the following criteria must be true:
    - <billerResponseType> as "SINGLE", <billerAcceptsAdhoc> as “FALSE” and <paymentAmountExactness> as "RANGE".
    - <billerResponseType> as "LIST"

Validation Rules (Needs to be performed by OUs):

- OUs to perform necessary validation on the permissible amount for each bill items based on the payment amount configuration defined.
- Validation in place by OUs to check whether customer payment amount falls within the minimum permissible amount and maximum permissible amount defined by the biller for that particular bill item, if payment amount configuration is “Range”.
- OUs to perform necessary validation to allow the payments of the bill items as per the “selectionType” defined.
- OUs to perform validation to allow multiple bill payments from the list of bills presented, if selectionType is “Multiple”.
- OUs to perform validation to allow customer to pay all the bills presented if selectionType is “All”.
- OUs to perform validation to allow only one bill payments from the list of bills presented, if selectionType is “Single”.
- OUs to perform amount multiple validation if any.