

Customer Name	PT ASTRA SEDAYA FINANCE
Project Name	SNAP API - LM
Project ID	

ASTRA CREDIT COMPANIES

[SNAP API - LM]

VERSION [1.0]


Software Requirement Specification	PT CIPTA SEDAYA DIGITAL INDONESIA ©2023
Author	Teddy Kurnialana

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Approvals & Acknowledgements

Acknowledged by:

ASTRA CREDIT COMPANIES

Teddy Kurnialana System Analyst	Stefanus Bayu Triantoro Cell Lead System Analyst
Budi Octaviandy PL/SQL Developer	
 Yosef Kely SOA Developer	Kendy Mayo Rahmatanto Cell Lead SOA

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Introduction

1.1 Purpose

Mendeskripsikan spesifikasi teknis sistem sesuai dengan kebutuhan dari user yang disebutkan pada Form terlampir.

1.2 Background

Adanya peraturan PBI Nomor 23/11/PBI/2021 tentang Standar Nasional Sistem Pembayaran dan PADG nomor 23/15/PADG/2021 tentang Standar Nasional Open API, sehingga API yang telah digunakan oleh ACC untuk payment dan collection harus dilakukan enhancement system menjadi format SNAP API sesuai dengan ketentuan Bank Indonesia. Sudah terbit nya sistem pembayaran baru dari BI yaitu BIFAST yang memungkinkan pembayaran secara realtime dengan biaya lebih murah.

1.3 Objectives

- Enhancement Front End References

Below is the referenced document of this document

#	Document Name	Location
1	FD Pencarian No Registration based on No Identitas	
2		

1.4 Version History

Version	Date	Author	Description of Changes
1.0	10/10/2023	Teddy Kurnialana	Initiate.

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2. Project Scope

2.1 In Scope

ID#	Originator (Project#, FD ID#)	Scope Item
TD 001	SNAP API Bank Permata untuk penerimaan	<ol style="list-style-type: none"> 1. Pembuatan API Token. 2. Enhance API Get Bill / Inquiry. 3. Enhance API Pay Bill / Payment.

2.2 Out of Scope

2.3 Effort Estimation

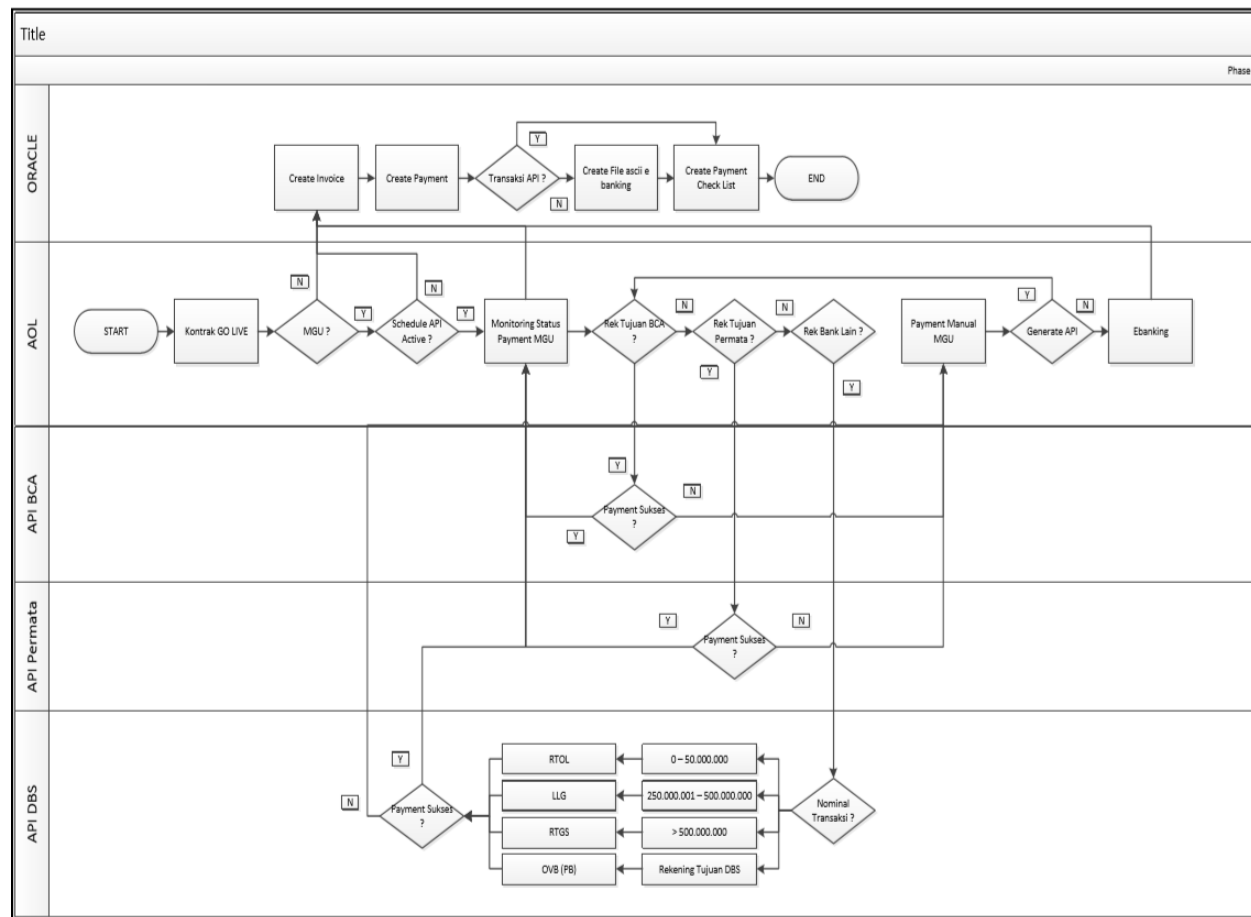
- Explore and design tables/queries
- Create logic to handle success/failed requests and develop the responses
- Testing
- Deploy services

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3. System overview

Existing Flow



Gambar 3.1 Flow Pembayaran

Penjelasan :

No	Deskripsi
1	Kontrak valid
2	Jika kontrak valid non MGU maka akan masuk ke flow process regular yang sudah eksisting, dengan jadwal scheduler normal untuk pembentukan invoice, payment, ascii e banking dan masuk ke bucket payment check list
3	Jika kontrak MGU valid diluar batch API, maka akan masuk ke flow process regular yang sudah eksisting
4	Jika kontrak MGU valid sesuai dengan jadwal batch API, maka akan masuk ke bucket monitoring status payment MGU di AOL sehingga dibayarkan melalui API disesuaikan dengan masing – masing bank rekening tujuan
5	Untuk rekening tujuan BCA maka akan menggunakan API BCA

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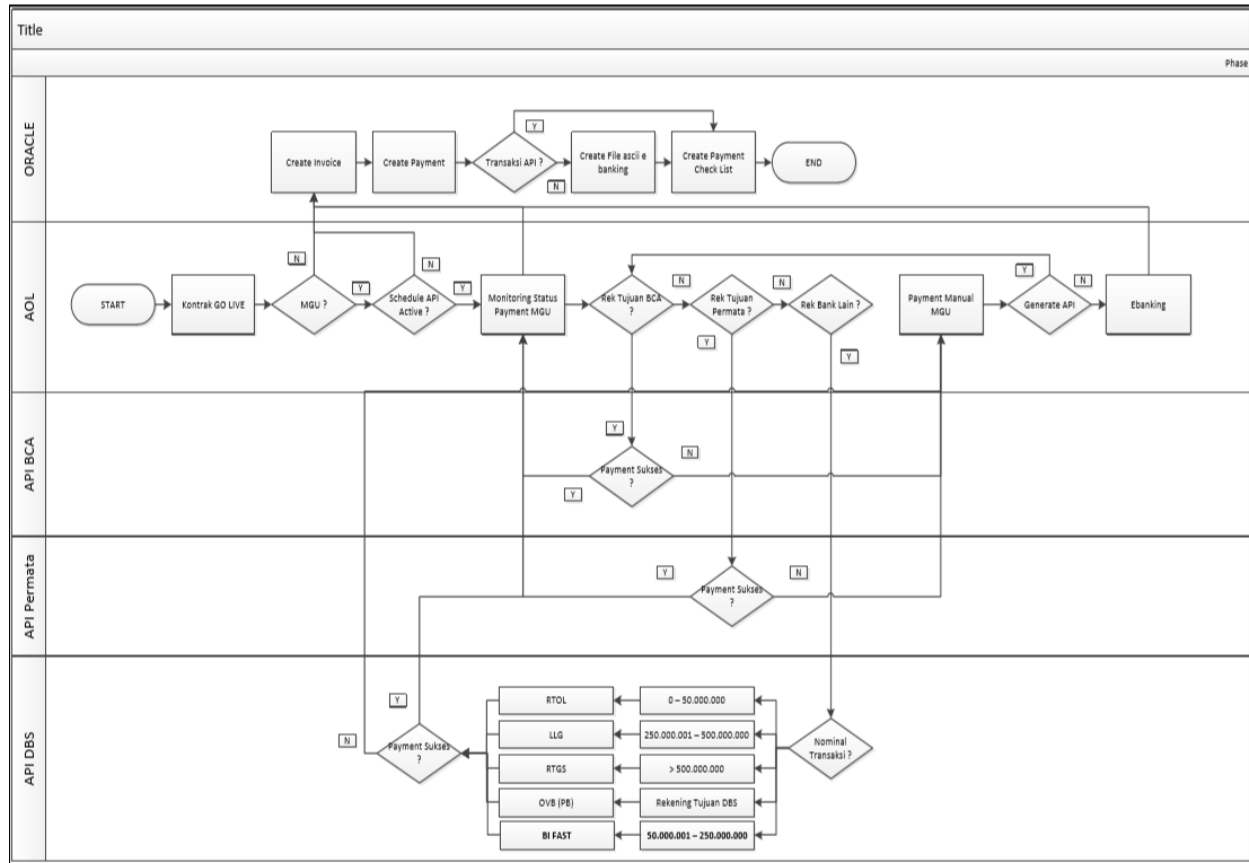
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6	Untuk rekening tujuan Permata maka akan menggunakan API Permata
7	<p>Untuk rekening tujuan non BCA dan Non Permata maka :</p> <ol style="list-style-type: none"> 1. rekening tujuan DBS : menggunakan jenis transaksi PB (OVB) DBS 2. rekening tujuan non DBS dengan nominal 1 – 50.000.000 : menggunakan RTOL DBS 3. rekening tujuan non DBS dengan nominal 50.000.001 – 500.000.000 : menggunakan LLG (SKNBI) DBS 4. rekening tujuan non DBS dengan nominal > 500.000.000 : menggunakan RTGS DBS
8	Jika payment sukses maka akan update data di monitoring status payment MGU, dan jika gagal maka dapat di generate ulang di AOL sehingga dapat di jalan kembali melalui API.
9	Jika tidak bisa di generate ulang di API maka user dapat generate ascii file e banking dan masuk seperti flow process dengan membentuk invoice, payment
10	Setelah data sudah di update sukses pada menu monitoring status payment MGU, maka akan membentuk invoice dan payment, namun tidak membentuk ascii e banking, dan langsung membentuk data payment check list

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New Flow



Gambar 3.2 Flow Baru Pembayaran

Penjelasan :

No	Deskripsi
1	Kontrak valid
2	Jika kontrak valid non MGU maka akan masuk ke flow process regular yang sudah eksisting, dengan jadwal scheduler normal untuk pembentukan invoice, payment, ascii e banking dan masuk ke bucket payment check list
3	Jika kontrak MGU valid diluar batch API, maka akan masuk ke flow process regular yang sudah eksisting
4	Jika kontrak MGU valid sesuai dengan jadwal batch API, maka akan masuk ke bucket monitoring status payment MGU di AOL sehingga dibayarkan melalui API disesuaikan dengan masing – masing bank rekening tujuan
5	Untuk rekening tujuan BCA maka akan menggunakan API BCA
6	Untuk rekening tujuan Permata maka akan menggunakan API Permata
7	Untuk rekening tujuan non BCA dan Non Permata maka : <ul style="list-style-type: none"> 1. rekening tujuan DBS : menggunakan jenis transaksi PB (OVB) DBS 2. rekening tujuan non DBS dengan nominal 1 – 50.000.000 : menggunakan RTOL DBS

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	3. rekening tujuan non DBS dengan nominal 50.000.001 – 250.000.000 : menggunakan BI FAST DBS 4. rekening tujuan non DBS dengan nominal 250.000.001 - 500.000.000 : menggunakan LLG (SKNBI) DBS 5. rekening tujuan non DBS dengan nominal > 500.000.000 menggunakan RTGS DBS
8	Jika payment sukses maka akan update data di monitoring status payment MGU, dan jika gagal maka dapat di generate ulang di AOL sehingga dapat di jalan kembali melalui API.
9	Jika tidak bisa di generate ulang di API maka user dapat generate ascii file e banking dan masuk seperti flow process dengan membentuk invoice, payment
10	Setelah data sudah di update sukses pada menu monitoring status payment MGU, maka akan membentuk invoice dan payment, namun tidak membentuk ascii e banking, dan langsung membentuk data payment check list

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4. Requirement Detail

TD 001 – 1. Pembuatan API Token

Pembuatan API Token untuk akses ketika ingin hit API inquiry / get bill dan payment / pay bill.

Spesifikasi API :

Nama	Generate Access Token
URI	https://[hostname]:[port]..v1.0/access-token/b2b
Transport Protocol	HTTP POST
Message Format	REST / JSON
Interaction Type	Synchronous

hostname : permatadev.acc.co.id

Header			
Field	Mandatory	Description	Request
Content-Type	Yes	Media Type	application/json
X-TIMESTAMP	Yes	Time Stamp	YYYY-MM-DDTHH:MM:SS 2022-03-21T10:11:40+07:00
X-CLIENT-KEY	Yes	Client ID from Mitra	
X-SIGNATURE	Yes	Request Message Signature	String to sign: client id + " " + timestamp Signature: SHA256withRSA(private key, string to sign)

Request			
Field	Type	Mandatory	Description
grantType	String	Yes	Client credential
additionalInfo	Object	No	

```
{
  "grantType" : "client_credentials",
  "additionalInfo" : {
  }
}
```

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Response			
Field	Type	Nullable	Description
responseCode	String	False	Response Code from Partner
responseMessage	String	False	Response Description
accessToken	String	False	Access Token
tokenType	String	False	Bearer Token
expiresIn	String	False	Expires 900s (15 mins)

```
{
  "responseCode": "2007300",
  "responseMessage": "Successful",
  "accessToken": "Xy8duZzAvv9bwDXxRxcb89tsuvk4MF4kx4lGfE4aCRVxR7XdERhbe1",
  "tokenType": "Bearer",
  "expiresIn": "900"
}
```

Menyesuaikan error code dengan kondisi yang di sediakan oleh Permata. Insert ke table `mst_ws_resp_va`

Token	
2007300	Success
4007301	Invalid field format {field_name}
4007302	Missing Mandatory Field {field_name}
4017300	Unauthorized Signature
4017301	Invalid Token
4037315	Transaction Not Permitted.[Reason]
4047312	Bill Not found
4047313	Invalid Amount
4047314	Paid Bill
5007300	General Error
5047300	Timeout

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TD 001 – 2. Enhance API Get Bill / Inquiry

Enhance API Get Bill / Inquiry untuk melakukan pengambilan data VA beserta nominal yang harus dibayarkan

Spesifikasi API :

Nama	API Virtual Account - Inquiry
URI	https://[hostname]:[port]..v1.0/transfer-va/inquiry
Transport Protocol	HTTP POST
Message Format	REST / JSON
Interaction Type	Synchronous

hostname : permatadev.acc.co.id

Header			
Field	Mandatory	Description	Request
Content-Type	Yes	Media Type	application/json
Authorization	Yes	Contains authorization Token	Bearer Token
X-TIMESTAMP	Yes	Time Stamp	YYYY-MM-DDTHH:MM:SS 2022-03-21T10:11:40+07:00
X-SIGNATURE	Yes	Request Message Signature	<p>String to sign: HTTP method+":"+endpoint url+":"+access token+":"+lowercase(hexEncode(sha256(minify(request body))))+":"+ timestamp</p> <p>Signature: HMAC_SHA512(client secret, string to sign) with client secret</p>
X-PARTNER-ID	Yes	Unique Partner ID	
X-EXTERNAL-ID	Yes	Unique Reference Number	
CHANNEL-ID	Yes	Channel Code	751

Request			
Field	Type	Mandatory	Description
partnerServiceId	String	Yes	Institution Code (8 digits left pad with space)

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customerNo	String	Yes	Virtual Account No (Length > 12 and Max 16)
virtualAccountNo	String	Yes	Virtual Account No (Length > 12 and Max 16)
channelCode	Numeric	No	Delivery Channel Code (see List)
inquiryRequestId	String	Yes	Unique identifier for this inquiry

```
{
  "partnerServiceId": "    7001",
  "customerNo": "7001085933245068",
  "virtualAccountNo": "7001085933245068",
  "channelCode": 751,
  "inquiryRequestId": "20221011123456"
}
```

Response			
Field	Type	Nullable	Description
responseCode	String	False	Response Code from Partner
responseMessage	String	False	Response Description
virtualAccountData.inquiryStatus	String	True	Status of inquiry
virtualAccountData.partnerServiceId	String	False	Instution Code (8 digits left pad with space)
virtualAccountData.customerNo	String	False	Virtual Account No (Length > 12 and Max 16)
virtualAccountData.virtualAccountNo	String	False	Virtual Account No (Length > 12 and Max 16)
virtualAccountData.virtualAccountName	String	False	Customer Name
virtualAccountData.inquiryRequestId	String	False	Unique identifier for this inquiry
virtualAccountData.transactionAmount.value	String	True	Transaction Amount
virtualAccountData.transactionAmount.currency	String	True	Currency
virtualAccountData.transactionID	String	True	Transaction ID

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```
{
  "responseCode": "2002400",
  "responseMessage": "Success",
  "virtualAccountData": {
    "inquiryStatus": "00",
    "partnerServiceId": "7001",
    "customerNo": "7001085933245068",
    "virtualAccountNo": "7001085933245068",
    "virtualAccountName": "4Pay Virtual Account",
    "inquiryRequestId": "20221011123456",
    "totalAmount": {
      "value": "12345678.00",
      "currency": "IDR"
    },
    "additionalInfo": {
      "transactionID": "TT0011283"
    }
  }
}
```

Response Failed

```
{
  "responseCode": "4002401",
  "responseMessage": "Invalid Field Format virtualAccountNo"
}
```

Table :

H2H_PAY_BILLS_VA@H2HDB

Penambahan kolom di tabel

23	INQUIRY_REQUEST_ID		varchar2(16)	alter table add column
24	CUSTOMER_NO		varchar2(16)	alter table add column
25	HASH_SOURCE_ACC_NO		varchar2(100)	alter table add column
26	SOURCE_ACC_NAME		sama dengan cust name	alter table add column
27	PAYMENT_REQUEST_ID		varchar2(16)	alter table add column
28	TRANSACTION_ID		varchar2(10)	alter table add column

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LOG_TRX_VA_PMT@H2HDB

Penambahan kolom di tabel

11	INQUIRY_REQUEST_ID		varchar2(16)	alter table add column
12	PAYMENT_REQUEST_ID		varchar2(16)	alter table add column

H2H_MIRROR_PBILLS_VA@H2HDB

Penambahan kolom di tabel

13	INQUIRY_REQUEST_ID		varchar2(16)	alter table add column
13	PAYMENT_REQUEST_ID		varchar2(16)	alter table add column
14	CUSTOMER_NO		varchar2(16)	alter table add column

Procedure :

MTR_H2H_PMT.PRC_GET_BILL_H2H_PMT

Enhance parameter menjadi

```
CREATE OR REPLACE PROCEDURE MTR_H2H_PMT.prc_get_bill_h2h_pmt (
  p_instcode      IN      VARCHAR2,
  p_vi_vanumber   IN      VARCHAR2,
  p_vi_traceno    IN      VARCHAR2, 'dihapus'
  p_vi_trndate    IN      VARCHAR2, 'input nya dari prc SYSDATE'
  p_vi_delchannel IN      VARCHAR2,
  p_vi_inq_req_id IN      VARCHAR2,
  p_vi_custno     IN      VARCHAR2,
  out_data_status OUT      sys_refcursor,
  out_data        OUT      sys_refcursor
```

Menyesuaikan kolom tabel dengan tabel yang baru di enhance. Menyesuaikan error code dengan kondisi yang di sediakan oleh Permata. Insert ke table mst_ws_resp_va

Inquiry	
2002400	Success
4002401	Invalid field format {field_name}
4002402	Missing Mandatory Field {field_name}
4012400	Unauthorized Signature
4012401	Invalid Token
4032415	Transaction Not Permitted.[Reason]
4042412	Bill Not found
4042413	Invalid Amount
4042414	Paid Bill
5002400	General Error
5042400	Timeout

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TD 001 – 3. Enhance API Pay Bill / Payment

Enhance API Pay Bill / Payment untuk melakukan pembayaran VA mengikuti nominal yang harus dibayarkan

Spesifikasi API :

Nama	API Virtual Account - Payment
URI	https://[hostname]:[port]../v1.0/transfer-va/payment
Transport Protocol	HTTP POST
Message Format	REST / JSON
Interaction Type	Synchronous

hostname : permatadev.acc.co.id

Header			
Field	Mandatory	Description	Request
Content-Type	Yes	Media Type	application/json
Authorization	Yes	Contains authorization Token	Bearer Token
X-TIMESTAMP	Yes	Time Stamp	YYYY-MM-DDTHH:MM:SS 2022-03-21T10:11:40+07:00
X-SIGNATURE	Yes	Request Message Signature	<p>String to sign: HTTP method+"."+endpoint url+"."+access token+"."+lowercase(hexEncode(sha256(minify(request body))))+"."+timestamp</p> <p>Signature: HMAC_SHA512(client secret, string to sign) with client secret</p>
X-PARTNER-ID	Yes	Unique Partner ID	
X-EXTERNAL-ID	Yes	Unique Reference Number	
CHANNEL-ID	Yes	Channel Code	751

Request			
Field	Type	Mandatory	Description
partnerServiceId	String	Yes	Institution Code (8 digits left pad with

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			space)
customerNo	String	Yes	Virtual Account No (Length > 12 and Max 16)
virtualAccountNo	String	Yes	Virtual Account No (Length > 12 and Max 16)
virtualAccountName	String	No	Custome Name
paymentRequestId	String	Yes	Unique identifier for Payment
channelCode	Numeric	No	Delivery Channel Code (see List)
hashedSourceAccountNo	String	No	Hashed source account number
paidAmount.value	String	Yes	Paid Amount Value
paidAmount.currency	String	Yes	Paid Currency
totalAmount.value	String	Yes	Transaction Amount Value
totalAmount.currency	String	Yes	Transaction Currency
trxDateTime	String	No	2022-08-23T20:29:25+07:00
additionalInfo.sourceAccount Name	String	No	Source Account Name (Masking)
additionalInfo.transactionID	String	No	Transaction ID

```
"partnerServiceId": " 7001",
"customerNo": "7001085933245068",
"virtualAccountNo": "7001085933245068",
"virtualAccountName": "4Pay Virtual Account",
"paymentRequestId": "20220801123459",
"channelCode": 751,
"hashedSourceAccountNo": "038d68c5cd1e2c55",
"paidAmount": {
  "value": "100000.00",
  "currency": "IDR"
},
"totalAmount": {
  "value": "100000.00",
  "currency": "IDR"
},
"trxDateTime": "2022-08-23T20:29:25+07:00",
"additionalInfo": {
  "sourceAccountName": "NAXX SAXXX",
  "transactionID": "TT0011283"
```

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Response			
Field	Type	Nullable	Description
responseCode	String	False	Response Code from Partner
responseMessage	String	False	Response Description
virtualAccountData.partnerServiceId	String	False	Instution Code (8 digits left pad with space)
virtualAccountData.customerNo	String	False	Virtual Account No (Length > 12 and Max 16)
virtualAccountData.virtualAccountNo	String	False	Virtual Account No (Length > 12 and Max 16)
virtualAccountData.virtualAccountName	String	False	Customer Name
virtualAccountData.paymentRequestId	String	False	Unique identifier for this payment
virtualAccountData.channelCode	Numeric	True	Delivery Channel Code (see List)
virtualAccountData.paidAmount.value	String	False	Paid Amount Value
virtualAccountData.paidAmount.currency	String	False	Paid Currency
virtualAccountData.totalAmount.value	String	True	Transaction Amount
virtualAccountData.totalAmount.currency	String	True	Transaction Currency

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```
{
  "responseCode": "2002500",
  "responseMessage": "Successful",
  "virtualAccountData": {
    "partnerServiceId": "7001",
    "customerNo": "7001085933245068",
    "virtualAccountNo": "7001085933245068",
    "virtualAccountName": "4Pay Virtual Account",
    "paymentRequestId": "20220801123459",
    "channelCode": 751,
    "paidAmount": {
      "value": "100000.00",
      "currency": "IDR"
    },
    "totalAmount": {
      "value": "100000.00",
      "currency": "IDR"
    }
  }
}
```

Response Failed

```
{
  "responseCode": "4002501",
  "responseMessage": "Invalid Field Format virtualAccountNo"
}
```

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Procedure :

MTR_H2H_PMT.PRC_PAY_BILL_H2H_PMT

Enhance parameter menjadi

```
CREATE OR REPLACE PROCEDURE MTR_H2H_PMT.prc_pay_bill_h2h_pmt (
  p_instcode      IN      VARCHAR2,
  p_vi_vanumber   IN      VARCHAR2,
  p_vi_custno     IN      VARCHAR2,
  p_vi_vaname     IN      VARCHAR2,
  p_payment_req_id IN      VARCHAR2,
  p_hash_source_acc IN     VARCHAR2,
  p_vi_traceno    IN      VARCHAR2,
  p_vi_trndate    IN      VARCHAR2,
  p_paid_amount   IN      VARCHAR2,
  p_paid_currency IN      VARCHAR2,
  p_total_amount  IN      VARCHAR2,
  p_total_currency IN     VARCHAR2,
  p_trx_date      IN      VARCHAR2,
  p_source_acc_name IN     VARCHAR2,
  p_trx_id        IN      VARCHAR2,
  p_vi_delchannel IN      VARCHAR2,
  out_data        OUT     sys_refcursor
)
```

Menyesuaikan kolom tabel dengan tabel yang baru di enhance. Menyesuaikan error code dengan kondisi yang di sediakan oleh Permata. Insert ke table mst_ws_resp_va

Payment	
2002500	Success
4002501	Invalid field format {field_name}
4002502	Missing Mandatory Field {field_name}
4012500	Unauthorized Signature
4012501	Invalid Token
4032515	Transaction Not Permitted.[Reason]
4042512	Bill Not found
4042513	Invalid Amount
4042514	Paid Bill
5002500	General Error
5042500	Timeout

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