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# GLODIPAY IFRAME API SPECIFICATION

## Table of Contents

INTRODUCTION .....	2
ENDPOINTS .....	3
API SPECIFICATION .....	4
IFRAME .....	4
Request:.....	4
paymentMethod .....	4
paymentFilter .....	4
Response.....	5
Data will be included when calling the callbackUrl .....	6
TRANSACTION QUERY.....	7
Request .....	7
Response.....	7
NOTIFICATION.....	8
Payload .....	8
Response.....	9
Test Cards with merchant ID start with 11xxxxxxx .....	10
Test Cards with merchant ID start with 14xxxxxxx .....	10
APPENDIX.....	10
Payment Methods .....	10
Status Codes .....	11
Country Codes .....	12
Card Type.....	19
Code example .....	20
PHP .....	20
NodeJS .....	21

# INTRODUCTION

This document involves description of:

- GLODIPAY Iframe Checkout: supports merchants to accept credit/debit cards

# ENDPOINTS

Environment	Base Endpoint
Test	<a href="https://payment-sandbox.gpayprocessing.com">https://payment-sandbox.gpayprocessing.com</a>
Production	Get it from the <a href="#">API Keys</a> page of the GLODIPAY Portal

# API SPECIFICATION

## IFRAME

### Request:

- Endpoint: /v1/card/iframe
- Method: POST
- Content Type: application/json

Parameter	Field Type	Required	Description
merchantId	String L (1,50)	M	Merchant's id
orderRef	String L (1,250)	M	Merchant <b>unique Identify</b> transaction
amount	Float	M	Invoice amount
currency	String L (3)	M	Invoice <a href="#">currency</a> , ISO 4217 standard specifies three-letter ("Alpha-3") codes. e.g. USD
cancelUrl	String L (1,300)	M	(Frontend) The URL the customer will be directed to if they decide to cancel payment and return to your website. Please make sure that the URL is under https!
callbackUrl	String L (1,300)	M	(Frontend) URL where the customer is directed to after a successful payment. Please make sure that the URL is under https!
notificationUrl	String L (1,300)	M	Endpoint on your server for GLODIPAY to send webhooks. Please make sure that the URL is under https!
errorUrl	String L (1,300)	M	(Frontend) URL where the customer is redirected in case of an error in the payment. Please make sure that the URL is under https!
orderDescription	String	M	A short description of the underlying transaction or trade to be displayed on the redirection screen
metadata	JSON	O	Set of key-value pairs that can be attached to the checkout session
transactionDocuments	JSON	O	Supporting documents for the transaction
paymentMethod	String	M	Specify the <a href="#">payment methods</a> you want displayed for the session
paymentFilter	JSON	O	Specify the payment methods you want removed for the session
feeBySeller	Number min(0), max(100)	O	An integer between 0 and 100. Percentage of processing fee to be paid by the merchant. GLODIPAY will charge the merchant an amount.
billingFirstName	String	O	Billing Details - Address, Recipient Name  If Country is US and CA, postal code is mandatory
billingLastName	String	O	
billingStreet1	String	O	
billingStreet2	String	O	
billingCity	String	O	

billingEmail	String	O	
billingState	String	O	
billingCountry	String	O	Address <a href="#">country</a> (Country (ISO 3166-1 alpha_2 country code))
billingPostalCode	String	O	Postal Code
billingPhoneCountryCode	String	O	Calling country code (for example, '1' for United States, '91' for India)
billingPhoneNumber	String	O	Phone Number
brandName	String L (1,255)	O	Override the Brand Name to be displayed on the GLODIPAY hosted checkout screen
colorMode	String L (1,255)	O	<p>You can pass up to 3 color codes, separated by ---.</p> <p>Examples:</p> <p>Color names:</p> <p>darkgreen---lightgreen---mediumseagreen</p> <p>HEX codes:</p> <p>#2e7d32---#e8f5e9---#81c784</p> <p>RGBA values:</p> <p>rgba(46,125,50,1)---rgba(232,245,233,1)---rgba(129,199,132,1)</p>
logoSource	String L (1,255)	O	Override the Logo to be displayed on the GLODIPAY hosted checkout screen
customerIp	String	M	IP address of the customer
signature	String	M	<p><a href="#">Signature</a> is calculated in the following steps:</p> <ol style="list-style-type: none"> <li>1. Concatenate all parameters values except the signature (arranged in ascending order of parameter's name) to a string</li> <li>2. RSA sign the hash by merchant's private key</li> </ol>

M = Mandatory

O = Optional

C = Condition

## Response

- Method: Form POST
- Content type: application/json

Parameter	Field Type	Required	Description
status	String	M	<b>created or error</b>
message	String	M	
url	String	O	
transactionId	String	O	

Data will be included when calling the callbackUrl

- Method: GET

GLODIPAY will sending payment result to merchant server's endpoint as specified in **callbackUrl**.

Parameter	Field Type	Required	Description
<a href="#">payload</a>	Base 64 String	M	Base 64 string contains JSON.

### Payload Base 64 decode JSON fields

Parameter	Field Type	Required	Description
status	String	M	General status of transaction.
transactionId	String	O	GLODIPAY Identify transaction
ref	String	O	Merchant Identify transaction
amount	Float	O	
currency	String	O	Invoice <a href="#">currency</a> , ISO 4217 standard specifies three-letter ("Alpha-3") codes. e.g. USD
signature	String	O	<a href="#">Signature</a> is calculated in the following steps: <ol style="list-style-type: none"> <li>1. Concatenate all parameters values except the signature (arranged in ascending order of parameter's name) to a string</li> <li>2. RSA sign the hash by merchant's private key</li> </ol>

## TRANSACTION QUERY

### Request

- Function: query the info of a transaction.
- Endpoint: /v1/checkout/query
- Method: POST
- Data format: JSON

Parameter	Field Type	Required	Description
merchantId	String	M	Merchant's id
transactionId	String	M	GLODIPAY Identify transaction
signature	String	M	<a href="#">Signature</a> is calculated in the following steps: <ol style="list-style-type: none"><li>1. Concatenate all parameters values except the signature (arranged in ascending order of parameter's name) to a string</li><li>2. RSA sign the hash by merchant's private key</li></ol>

### Response

The same with [NOTIFICATION payload](#)



## NOTIFICATION

- Function: send instant payment notification to merchant over API
- Method: POST
- Data format: JSON
- **Return JSON payload {"returnCode": "100"} in 30 seconds to let GLODIPAY recognize that you have received the Webhook. If not, GLODIPAY will send the Webhook 10 times. The first time is 30 minutes after the transaction is initiated, and then every 5 minutes thereafter if transaction is completely succeeded.**

## Payload

Parameter	Field Type	Required	Description
merchantId	String	M	Merchant's id
transactionId	String	M	GLODIPAY Identify transaction
transactionNumber	String	M	GLODIPAY Transaction Number
ref	String	M	Merchant Identify transaction
currency	String	M	Invoice <a href="#">currency</a> , ISO 4217 standard specifies three-letter ("Alpha-3") codes. e.g. USD
amount	Float	M	
paidAmount	Float	O	Paid amount
settlementAmount	Float	O	Settlement amount
estimationSettlementAt	ISO 8601 datetime format	O	Estimation Settlement Datetime E.g: 2023-12-16T02:13:37+00:00
<a href="#">fees</a>	JSON	O	Fees JSON
<a href="#">paymentMethodDetails</a>	JSON	O	
status	String	M	Status of transaction
<a href="#">statusCode</a>	Number	M	Status code of transaction
metadata	JSON	O	Set of key-value pairs of checkout session
transactionDocuments	JSON	O	Documents of the transaction
message	String	O	Transaction message
transactionCreatedAt	ISO 8601 datetime format	M	Datetime from GLODIPAY system E.g: 2023-12-16T02:13:37+00:00
originalTransactionCreatedAt	ISO 8601 datetime format	M	Original Datetime E.g: 2023-12-16T02:13:37+00:00
signature	String	M	<a href="#">Signature</a> is calculated in the following steps: <ol style="list-style-type: none"> <li>1. Concatenate all parameters values except the signature (arranged in ascending order of parameter's name) to a string</li> <li>2. RSA sign the hash by merchant's private key</li> </ol>

## fees JSON fields

Parameter	Field Type	Required	Description
operate	Float	O	Total fees
buyer	Float	O	Buyer fees amount
seller	Float	O	Seller fees amount
rolling	Float	O	Rolling fees amount
estimationRollingReleaseAt	ISO 8601 datetime format	O	Estimation Rolling Release Datetime E.g: 2025-04-27T02:47:02+00:00

## paymentMethodDetails JSON fields

Parameter	Field Type	Required	Description
displayName	String	O	Payment method label
group	String	O	Payment method group type
family	String	O	Payment method family type
type	String	O	Name of payment method type You can use this value to specify Payment method in <a href="#">POST PAYMENT</a> of field <a href="#">paymentMethod</a> or <a href="#">paymentFilter</a>
Value of <a href="#">type</a>	JSON	O	

## Response

- Data format: JSON

Parameter	Field Type	Required	Description
returnCode	String	R	Return code "100" to let GLODIPAY recognize that you have received the webhook.
description	String L (1,1500)	O	Description for the response

## Test Cards with merchant ID start with 11xxxxxxxx

Card Number	Expire	CVV	Password	
4242424242424242	12/30	123		Success
40000000000001018	12/30	123		Fail
4012888888881881	01/30	029	Success: 123456 Fail: 111111	3DS Payment
5111111111111118	01/30	029	Success: 123456 Fail: 111111	3DS Payment
4141414141414141	12/30	123	Success: 123456 Fail: 111111	3DS Payment

## Test Cards with merchant ID start with 14xxxxxxxx

Card Number	Expire	CVV	Password	
4111111111111111	01/30	029		Success
5555555555554444	01/30	029		Success
4012888888881881	01/30	029	Success: 123456 Fail: 111111	3DS Payment
5111111111111118	01/30	029	Success: 123456 Fail: 111111	3DS Payment
4141414141414141	12/30	123	Success: 123456 Fail: 111111	3DS Payment

## APPENDIX

### *Payment Methods*

NAME	DESCRIPTION
card	Credit or Debit cards

### *Status Codes*

CODE	DESCRIPTION
1	incomplete
2	pending
3	error
4	failed
5	under_review
6	successful
7	released
8	refund_initiated
9	refund_failed
10	refund_under_review
11	refund_successful
12	refund_partially_failed
13	refund_partially_successful
14	canceled
15	rejected
16	expired
17	documents_uploaded
18	void_initiated
19	void_under_review
20	void_successful
21	void_failed
22	void_partially_successful
23	void_partially_failed

## Country Codes

Code	Country name (using <a href="#">title case</a> )
<a href="#">AD</a>	<a href="#">Andorra</a>
<a href="#">AE</a>	<a href="#">United Arab Emirates</a>
<a href="#">AF</a>	<a href="#">Afghanistan</a>
<a href="#">AG</a>	<a href="#">Antigua and Barbuda</a>
<a href="#">AI</a>	<a href="#">Anguilla</a>
<a href="#">AL</a>	<a href="#">Albania</a>
<a href="#">AM</a>	<a href="#">Armenia</a>
<a href="#">AO</a>	<a href="#">Angola</a>
<a href="#">AQ</a>	<a href="#">Antarctica</a>
<a href="#">AR</a>	<a href="#">Argentina</a>
<a href="#">AS</a>	<a href="#">American Samoa</a>
<a href="#">AT</a>	<a href="#">Austria</a>
<a href="#">AU</a>	<a href="#">Australia</a>
<a href="#">AW</a>	<a href="#">Aruba</a>
<a href="#">AX</a>	<a href="#">Åland Islands</a>
<a href="#">AZ</a>	<a href="#">Azerbaijan</a>
<a href="#">BA</a>	<a href="#">Bosnia and Herzegovina</a>
<a href="#">BB</a>	<a href="#">Barbados</a>
<a href="#">BD</a>	<a href="#">Bangladesh</a>
<a href="#">BE</a>	<a href="#">Belgium</a>
<a href="#">BF</a>	<a href="#">Burkina Faso</a>
<a href="#">BG</a>	<a href="#">Bulgaria</a>
<a href="#">BH</a>	<a href="#">Bahrain</a>
<a href="#">BI</a>	<a href="#">Burundi</a>
<a href="#">BJ</a>	<a href="#">Benin</a>
<a href="#">BL</a>	<a href="#">Saint Barthélemy</a>
<a href="#">BM</a>	<a href="#">Bermuda</a>
<a href="#">BN</a>	<a href="#">Brunei Darussalam</a>
<a href="#">BO</a>	<a href="#">Bolivia, Plurinational State of</a>
<a href="#">BQ</a>	<a href="#">Bonaire, Sint Eustatius and Saba</a>
<a href="#">BR</a>	<a href="#">Brazil</a>
<a href="#">BS</a>	<a href="#">Bahamas</a>
<a href="#">BT</a>	<a href="#">Bhutan</a>

Code	Country name (using <a href="#">title case</a> )
<a href="#">BV</a>	<a href="#">Bouvet Island</a>
<a href="#">BW</a>	<a href="#">Botswana</a>
<a href="#">BY</a>	<a href="#">Belarus</a>
<a href="#">BZ</a>	<a href="#">Belize</a>
<a href="#">CA</a>	<a href="#">Canada</a>
<a href="#">CC</a>	<a href="#">Cocos (Keeling) Islands</a>
<a href="#">CD</a>	<a href="#">Congo, Democratic Republic of the</a>
<a href="#">CF</a>	<a href="#">Central African Republic</a>
<a href="#">CG</a>	<a href="#">Congo</a>
<a href="#">CH</a>	<a href="#">Switzerland</a>
<a href="#">CI</a>	<a href="#">Côte d'Ivoire</a>
<a href="#">CK</a>	<a href="#">Cook Islands</a>
<a href="#">CL</a>	<a href="#">Chile</a>
<a href="#">CM</a>	<a href="#">Cameroon</a>
<a href="#">CN</a>	<a href="#">China</a>
<a href="#">CO</a>	<a href="#">Colombia</a>
<a href="#">CR</a>	<a href="#">Costa Rica</a>
<a href="#">CU</a>	<a href="#">Cuba</a>
<a href="#">CV</a>	<a href="#">Cabo Verde</a>
<a href="#">CW</a>	<a href="#">Curaçao</a>
<a href="#">CX</a>	<a href="#">Christmas Island</a>
<a href="#">CY</a>	<a href="#">Cyprus</a>
<a href="#">CZ</a>	<a href="#">Czechia</a>
<a href="#">DE</a>	<a href="#">Germany</a>
<a href="#">DJ</a>	<a href="#">Djibouti</a>
<a href="#">DK</a>	<a href="#">Denmark</a>
<a href="#">DM</a>	<a href="#">Dominica</a>
<a href="#">DO</a>	<a href="#">Dominican Republic</a>
<a href="#">DZ</a>	<a href="#">Algeria</a>
<a href="#">EC</a>	<a href="#">Ecuador</a>
<a href="#">EE</a>	<a href="#">Estonia</a>
<a href="#">EG</a>	<a href="#">Egypt</a>
<a href="#">EH</a>	<a href="#">Western Sahara</a>
<a href="#">ER</a>	<a href="#">Eritrea</a>
<a href="#">ES</a>	<a href="#">Spain</a>

Code	Country name (using <a href="#">title case</a> )
<a href="#">ET</a>	<a href="#">Ethiopia</a>
<a href="#">FI</a>	<a href="#">Finland</a>
<a href="#">FJ</a>	<a href="#">Fiji</a>
<a href="#">FK</a>	<a href="#">Falkland Islands (Malvinas)</a>
<a href="#">FM</a>	<a href="#">Micronesia, Federated States of</a>
<a href="#">FO</a>	<a href="#">Faroe Islands</a>
<a href="#">FR</a>	<a href="#">France</a>
<a href="#">GA</a>	<a href="#">Gabon</a>
<a href="#">GB</a>	<a href="#">United Kingdom of Great Britain and Northern Ireland</a>
<a href="#">GD</a>	<a href="#">Grenada</a>
<a href="#">GE</a>	<a href="#">Georgia</a>
<a href="#">GF</a>	<a href="#">French Guiana</a>
<a href="#">GG</a>	<a href="#">Guernsey</a>
<a href="#">GH</a>	<a href="#">Ghana</a>
<a href="#">GI</a>	<a href="#">Gibraltar</a>
<a href="#">GL</a>	<a href="#">Greenland</a>
<a href="#">GM</a>	<a href="#">Gambia</a>
<a href="#">GN</a>	<a href="#">Guinea</a>
<a href="#">GP</a>	<a href="#">Guadeloupe</a>
<a href="#">GQ</a>	<a href="#">Equatorial Guinea</a>
<a href="#">GR</a>	<a href="#">Greece</a>
<a href="#">GS</a>	<a href="#">South Georgia and the South Sandwich Islands</a>
<a href="#">GT</a>	<a href="#">Guatemala</a>
<a href="#">GU</a>	<a href="#">Guam</a>
<a href="#">GW</a>	<a href="#">Guinea-Bissau</a>
<a href="#">GY</a>	<a href="#">Guyana</a>
<a href="#">HK</a>	<a href="#">Hong Kong</a>
<a href="#">HM</a>	<a href="#">Heard Island and McDonald Islands</a>
<a href="#">HN</a>	<a href="#">Honduras</a>
<a href="#">HR</a>	<a href="#">Croatia</a>
<a href="#">HT</a>	<a href="#">Haiti</a>
<a href="#">HU</a>	<a href="#">Hungary</a>
<a href="#">ID</a>	<a href="#">Indonesia</a>
<a href="#">IE</a>	<a href="#">Ireland</a>
<a href="#">IL</a>	<a href="#">Israel</a>

Code	Country name (using <a href="#">title case</a> )
<a href="#">IM</a>	<a href="#">Isle of Man</a>
<a href="#">IN</a>	<a href="#">India</a>
<a href="#">IO</a>	<a href="#">British Indian Ocean Territory</a>
<a href="#">IQ</a>	<a href="#">Iraq</a>
<a href="#">IR</a>	<a href="#">Iran, Islamic Republic of</a>
<a href="#">IS</a>	<a href="#">Iceland</a>
<a href="#">IT</a>	<a href="#">Italy</a>
<a href="#">JE</a>	<a href="#">Jersey</a>
<a href="#">JM</a>	<a href="#">Jamaica</a>
<a href="#">JO</a>	<a href="#">Jordan</a>
<a href="#">JP</a>	<a href="#">Japan</a>
<a href="#">KE</a>	<a href="#">Kenya</a>
<a href="#">KG</a>	<a href="#">Kyrgyzstan</a>
<a href="#">KH</a>	<a href="#">Cambodia</a>
<a href="#">KI</a>	<a href="#">Kiribati</a>
<a href="#">KM</a>	<a href="#">Comoros</a>
<a href="#">KN</a>	<a href="#">Saint Kitts and Nevis</a>
<a href="#">KP</a>	<a href="#">Korea, Democratic People's Republic of</a>
<a href="#">KR</a>	<a href="#">Korea, Republic of</a>
<a href="#">KW</a>	<a href="#">Kuwait</a>
<a href="#">KY</a>	<a href="#">Cayman Islands</a>
<a href="#">KZ</a>	<a href="#">Kazakhstan</a>
<a href="#">LA</a>	<a href="#">Lao People's Democratic Republic</a>
<a href="#">LB</a>	<a href="#">Lebanon</a>
<a href="#">LC</a>	<a href="#">Saint Lucia</a>
<a href="#">LI</a>	<a href="#">Liechtenstein</a>
<a href="#">LK</a>	<a href="#">Sri Lanka</a>
<a href="#">LR</a>	<a href="#">Liberia</a>
<a href="#">LS</a>	<a href="#">Lesotho</a>
<a href="#">LT</a>	<a href="#">Lithuania</a>
<a href="#">LU</a>	<a href="#">Luxembourg</a>
<a href="#">LV</a>	<a href="#">Latvia</a>
<a href="#">LY</a>	<a href="#">Libya</a>
<a href="#">MA</a>	<a href="#">Morocco</a>
<a href="#">MC</a>	<a href="#">Monaco</a>



Code	Country name (using <a href="#">title case</a> )
<a href="#">MD</a>	<a href="#">Moldova, Republic of</a>
<a href="#">ME</a>	<a href="#">Montenegro</a>
<a href="#">MF</a>	<a href="#">Saint Martin (French part)</a>
<a href="#">MG</a>	<a href="#">Madagascar</a>
<a href="#">MH</a>	<a href="#">Marshall Islands</a>
<a href="#">MK</a>	<a href="#">North Macedonia</a>
<a href="#">ML</a>	<a href="#">Mali</a>
<a href="#">MM</a>	<a href="#">Myanmar</a>
<a href="#">MN</a>	<a href="#">Mongolia</a>
<a href="#">MO</a>	<a href="#">Macao</a>
<a href="#">MP</a>	<a href="#">Northern Mariana Islands</a>
<a href="#">MQ</a>	<a href="#">Martinique</a>
<a href="#">MR</a>	<a href="#">Mauritania</a>
<a href="#">MS</a>	<a href="#">Montserrat</a>
<a href="#">MT</a>	<a href="#">Malta</a>
<a href="#">MU</a>	<a href="#">Mauritius</a>
<a href="#">MV</a>	<a href="#">Maldives</a>
<a href="#">MW</a>	<a href="#">Malawi</a>
<a href="#">MX</a>	<a href="#">Mexico</a>
<a href="#">MY</a>	<a href="#">Malaysia</a>
<a href="#">MZ</a>	<a href="#">Mozambique</a>
<a href="#">NA</a>	<a href="#">Namibia</a>
<a href="#">NC</a>	<a href="#">New Caledonia</a>
<a href="#">NE</a>	<a href="#">Niger</a>
<a href="#">NF</a>	<a href="#">Norfolk Island</a>
<a href="#">NG</a>	<a href="#">Nigeria</a>
<a href="#">NI</a>	<a href="#">Nicaragua</a>
<a href="#">NL</a>	<a href="#">Netherlands, Kingdom of the</a>
<a href="#">NO</a>	<a href="#">Norway</a>
<a href="#">NP</a>	<a href="#">Nepal</a>
<a href="#">NR</a>	<a href="#">Nauru</a>
<a href="#">NU</a>	<a href="#">Niue</a>
<a href="#">NZ</a>	<a href="#">New Zealand</a>
<a href="#">OM</a>	<a href="#">Oman</a>
<a href="#">PA</a>	<a href="#">Panama</a>

Code	Country name (using <a href="#">title case</a> )
<a href="#">PE</a>	<a href="#">Peru</a>
<a href="#">PF</a>	<a href="#">French Polynesia</a>
<a href="#">PG</a>	<a href="#">Papua New Guinea</a>
<a href="#">PH</a>	<a href="#">Philippines</a>
<a href="#">PK</a>	<a href="#">Pakistan</a>
<a href="#">PL</a>	<a href="#">Poland</a>
<a href="#">PM</a>	<a href="#">Saint Pierre and Miquelon</a>
<a href="#">PN</a>	<a href="#">Pitcairn</a>
<a href="#">PR</a>	<a href="#">Puerto Rico</a>
<a href="#">PS</a>	<a href="#">Palestine, State of</a>
<a href="#">PT</a>	<a href="#">Portugal</a>
<a href="#">PW</a>	<a href="#">Palau</a>
<a href="#">PY</a>	<a href="#">Paraguay</a>
<a href="#">QA</a>	<a href="#">Qatar</a>
<a href="#">RE</a>	<a href="#">Réunion</a>
<a href="#">RO</a>	<a href="#">Romania</a>
<a href="#">RS</a>	<a href="#">Serbia</a>
<a href="#">RU</a>	<a href="#">Russian Federation</a>
<a href="#">RW</a>	<a href="#">Rwanda</a>
<a href="#">SA</a>	<a href="#">Saudi Arabia</a>
<a href="#">SB</a>	<a href="#">Solomon Islands</a>
<a href="#">SC</a>	<a href="#">Seychelles</a>
<a href="#">SD</a>	<a href="#">Sudan</a>
<a href="#">SE</a>	<a href="#">Sweden</a>
<a href="#">SG</a>	<a href="#">Singapore</a>
<a href="#">SH</a>	<a href="#">Saint Helena, Ascension and Tristan da Cunha</a>
<a href="#">SI</a>	<a href="#">Slovenia</a>
<a href="#">SJ</a>	<a href="#">Svalbard and Jan Mayen</a>
<a href="#">SK</a>	<a href="#">Slovakia</a>
<a href="#">SL</a>	<a href="#">Sierra Leone</a>
<a href="#">SM</a>	<a href="#">San Marino</a>
<a href="#">SN</a>	<a href="#">Senegal</a>
<a href="#">SO</a>	<a href="#">Somalia</a>
<a href="#">SR</a>	<a href="#">Suriname</a>
<a href="#">SS</a>	<a href="#">South Sudan</a>

Code	Country name (using <a href="#">title case</a> )
<a href="#">ST</a>	<a href="#">Sao Tome and Principe</a>
<a href="#">SV</a>	<a href="#">El Salvador</a>
<a href="#">SX</a>	<a href="#">Sint Maarten (Dutch part)</a>
<a href="#">SY</a>	<a href="#">Syrian Arab Republic</a>
<a href="#">SZ</a>	<a href="#">Eswatini</a>
<a href="#">TC</a>	<a href="#">Turks and Caicos Islands</a>
<a href="#">TD</a>	<a href="#">Chad</a>
<a href="#">TF</a>	<a href="#">French Southern Territories</a>
<a href="#">TG</a>	<a href="#">Togo</a>
<a href="#">TH</a>	<a href="#">Thailand</a>
<a href="#">TJ</a>	<a href="#">Tajikistan</a>
<a href="#">TK</a>	<a href="#">Tokelau</a>
<a href="#">TL</a>	<a href="#">Timor-Leste</a>
<a href="#">TM</a>	<a href="#">Turkmenistan</a>
<a href="#">TN</a>	<a href="#">Tunisia</a>
<a href="#">TO</a>	<a href="#">Tonga</a>
<a href="#">TR</a>	<a href="#">Türkiye</a>
<a href="#">TT</a>	<a href="#">Trinidad and Tobago</a>
<a href="#">TV</a>	<a href="#">Tuvalu</a>
<a href="#">TW</a>	<a href="#">Taiwan, Province of China</a>
<a href="#">TZ</a>	<a href="#">Tanzania, United Republic of</a>
<a href="#">UA</a>	<a href="#">Ukraine</a>
<a href="#">UG</a>	<a href="#">Uganda</a>
<a href="#">UM</a>	<a href="#">United States Minor Outlying Islands</a>
<a href="#">US</a>	<a href="#">United States of America</a>
<a href="#">UY</a>	<a href="#">Uruguay</a>
<a href="#">UZ</a>	<a href="#">Uzbekistan</a>
<a href="#">VA</a>	<a href="#">Holy See</a>
<a href="#">VC</a>	<a href="#">Saint Vincent and the Grenadines</a>
<a href="#">VE</a>	<a href="#">Venezuela, Bolivarian Republic of</a>
<a href="#">VG</a>	<a href="#">Virgin Islands (British)</a>
<a href="#">VI</a>	<a href="#">Virgin Islands (U.S.)</a>
<a href="#">VN</a>	<a href="#">Viet Nam</a>
<a href="#">VU</a>	<a href="#">Vanuatu</a>
<a href="#">WF</a>	<a href="#">Wallis and Futuna</a>

Code	Country name (using <a href="#">title case</a> )
<a href="#">WS</a>	<a href="#">Samoa</a>
<a href="#">YE</a>	<a href="#">Yemen</a>
<a href="#">YT</a>	<a href="#">Mayotte</a>
<a href="#">ZA</a>	<a href="#">South Africa</a>
<a href="#">ZM</a>	<a href="#">Zambia</a>
<a href="#">ZW</a>	<a href="#">Zimbabwe</a>

### *Card Type*

No.	Card Type	Code
1	VISA	visa
2	MASTER CARD	mastercard
3	AMERICAN EXPRESS	amex
4	JCB	jcb
5	MAESTRO	maestro
6	DISCOVER	discover
7	UNION PAY	union-pay
8	DINERS	diners

## Code example

### PHP

```
<?php
function generateSignature(array $data): string
{
    $privateKey = openssl_pkey_get_private("-----BEGIN PRIVATE KEY-----
MIIJQQIBADANBgkqhkiG9w0BAQEFAASCCSswggknAgEAAoICAQDwgPXMA8tv7boG
...
8S7wZ3XcsaLzlzMXrxhykwsDFBFg
-----END PRIVATE KEY-----
");
    ksort($data, SORT_NATURAL);
    array_walk_recursive(
        $data,
        static function(&$field) {
            $field = trim($field);
        }
    );
    openssl_sign(json_encode($data), $signature,
        $privateKey, 'md5WithRSAEncryption'
    );
    return base64_encode($signature);
}

function verifySignature(array $data): bool
{
    $publicKey = openssl_pkey_get_public("-----BEGIN PUBLIC KEY-----
MIICljANBgkqhkiG9w0BAQEFAAOCAg8AMIICGgKCAgEAXu+5iLOm7KCXoGxUMHX5
...
PR1ofGsEO8/N/qJuggQc2P8CAwEAAQ==
-----END PUBLIC KEY-----
");
    $dataWithoutSignature = array_filter($data, static function ($key) {
        return $key !== 'signature';
    }, ARRAY_FILTER_USE_KEY);
    $signature = $data['signature'];
    ksort($dataWithoutSignature, SORT_NATURAL);
    array_walk_recursive(
        $dataWithoutSignature,
        static function(&$field) {
            $field = trim($field);
        }
    );
    $result = openssl_verify(json_encode($dataWithoutSignature), base64_decode($signature), $publicKey,
'md5WithRSAEncryption');
    return $result === 1;
}
```

## NodeJS

```
function generateSignature(data) {
  const crypto = require('crypto');
  const privateKey = `-----BEGIN PRIVATE KEY-----
MIIJQQIBADANBgkqhkiG9w0BAQEFAASCCSswggknAgEAAoICAQDwgPXMA8tv7boG
...
8S7wZ3XcsaLzlzMXrxhykwsDFBFg
-----END PRIVATE KEY-----
`;
  const clonedData = JSON.parse(JSON.stringify(data));

  Object.keys(clonedData).forEach(key => {
    if (typeof clonedData[key] === 'number') {
      clonedData[key] = String(clonedData[key]);
    }
  });

  const sortedData = {};
  Object.keys(clonedData)
    .sort((a, b) => a.localeCompare(b, undefined, { numeric: true, sensitivity: 'base' }))
    .forEach(key => {
      sortedData[key] = clonedData[key];
    });

  const trimRecursive = (obj) => {
    if (typeof obj !== 'object' || obj === null) {
      return typeof obj === 'string' ? obj.trim() : obj;
    }

    if (Array.isArray(obj)) {
      return obj.map(item => trimRecursive(item));
    }

    const result = {};
    for (const key in obj) {
      if (Object.prototype.hasOwnProperty.call(obj, key)) {
        result[key] = trimRecursive(obj[key]);
      }
    }
    return result;
  };

  const trimmedData = trimRecursive(sortedData);

  const jsonData = JSON.stringify(trimmedData).replace(/\\/g, '\\\\');

  const sign = crypto.createSign('md5WithRSAEncryption');
  sign.update(jsonData);
  const signature = sign.sign(privateKey, 'base64');

  return signature;
}
```