

Cardano Plastiks Smart Contract Test Cases Scenario

Test No	User Stories	Conditions	Steps	Expected output	Actual output	Result
1	PlastikBurner	Submit a request with valid data	<ol style="list-style-type: none"> 1. Enter the pubKeyHash (Hex) 2. Enter the tokenName (Hex) 3. Enter the policyId (Hex) 4. Provide the filePath 	A new file should be created containing the CBOR hex	A new file is created containing the CBOR hex	Pass

The screenshot displays a code editor with the file `PlastikBurner.hs` open. The code defines a smart contract with the following structure:

```

5 {-# LANGUAGE FlexibleContexts #-}
6 {-# LANGUAGE MultiParamTypeClasses #-}
7 {-# LANGUAGE OverloadedStrings #-}
8 {-# LANGUAGE ScopedTypeVariables #-}
9 {-# LANGUAGE TemplateHaskell #-}

```

Below the code editor, a terminal window shows the execution of the smart contract. The terminal output indicates that certain dependencies were not needed for compilation and lists the following dependencies:

```

but were not needed for compilation:
- tasty-quickcheck-0.10.2
- tasty-1.4.3
- quickcheck-instances-0.3.29
- plutus-script-utils-1.2.0.0
- QuickCheck-2.14.2

```

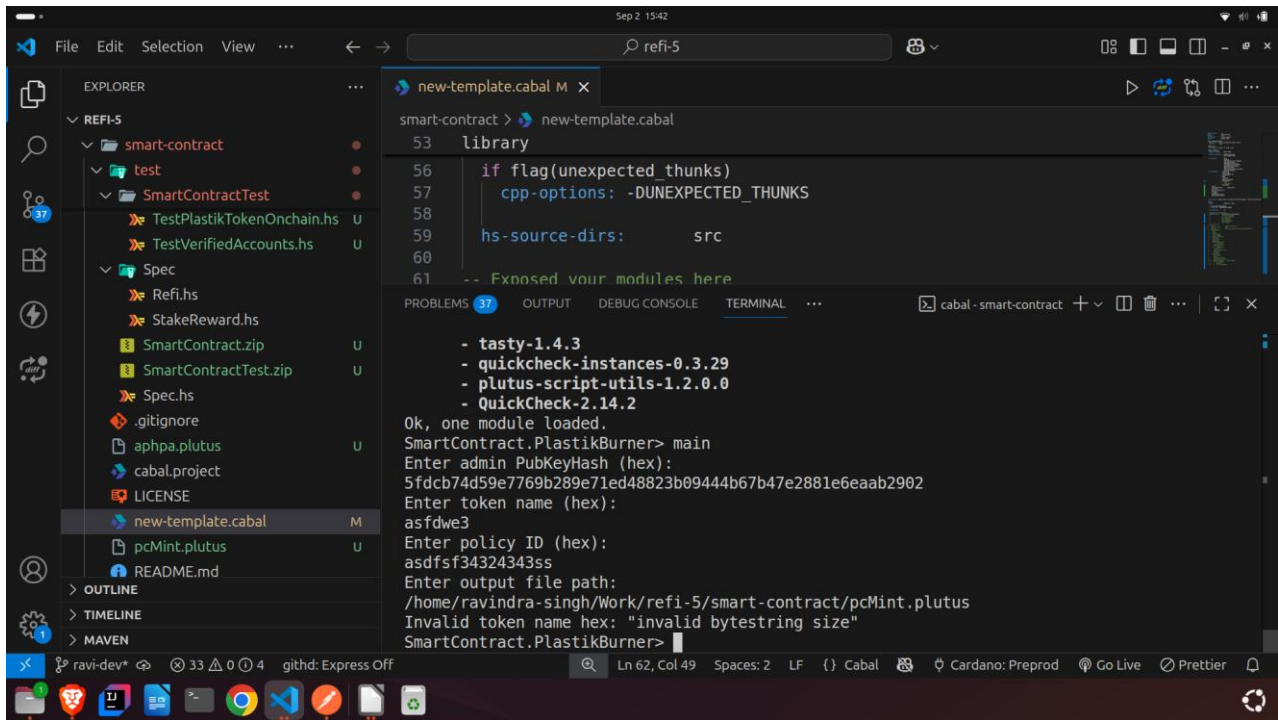
The terminal then shows the execution of the `SmartContract.PlastikBurner` module, where the user enters the following values:

```

SmartContract.PlastikBurner> main
Enter admin PubKeyHash (hex):
22c7fd84e95d7f95c8b00d926db3d6dde0bffffe6844844b9780eef2
Enter token name (hex):
52415649544f4b454e
Enter policy ID (hex):
329d7fd2c76bd18b80f2359968b99dcb44786ad56e98e108325f8026
Enter output file path:
/home/ravindra-singh/Work/refi-5/smart-contract/pcMint.plutus
Successfully wrote PlastikBurner validator.
SmartContract.PlastikBurner>

```

2	PlastikBurner	Submit a request with Invalid data	1. Enter an invalid pubKeyHash (non-Hex value) 2. Enter an invalid tokenName (non-Hex value) 3. Enter an invalid policyId (non-Hex value) 4. Provide an invalid or missing filePath	An error message should be displayed for each invalid field	Error messages are displayed for the invalid fields	Pass
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3	PCMintV2	Submit a request with valid data	<ol style="list-style-type: none"> 1. Enter the recipient public key hash (Hex) 2. Enter the amount (number of NFTs to mint) 	A message should be displayed confirming that the NFT policy has been written to the specified file	A message is displayed confirming that the NFT policy has been written to the specified file path, and the	Pass
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			3. Enter the NFT data (Hex-encoded) 4. Provide the output file path	path, and the CBOR hex for the NFT should be generated	CBOR hex for the NFT is generated.	
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```

14 common common-all
45 | directory,
46 | filepath,
47 | base16-bytestring,
48 | quickcheck-instances
49
PROBLEMS 24 OUTPUT DEBUG CONSOLE TERMINAL TEST RESULTS PORTS GITHD cabal - smart-contract + -
- tasty-1.4.3
- quickcheck-instances-0.3.29
- plutus-tx-plugin-1.0.0.0
- plutus-script-utils-1.2.0.0
- QuickCheck-2.14.2
Ok, one module loaded.
SmartContract.PCMintV2> main
Enter recipient PubKeyHash (hex-encoded):
22c7f1d84e95d7f95c8b00d926db3d6dde0bffe6844844b9780eef2
Enter amount (how many NFTs to mint):
1
Enter nftData (hex-encoded, e.g., 436172626f6e):
436172626f6e
Enter output file path (e.g., Plastik/PCMint.plutus):
/home/ravindra-singh/Work/refi-5/smart-contract/pcMint.plutus
Successfully wrote NFT policy to: /home/ravindra-singh/Work/refi-5/smart-contract/pcMint.plutus
SmartContract.PCMintV2>

```

4	PCMintV2	Submit a request with valid data	1. Enter an invalid recipient public key hash (non-Hex value) 2. Enter an invalid amount (non-numeric or negative value) 3. Enter invalid NFT data (non-Hex or corrupted data) 4. Provide an invalid or inaccessible output file path	Error messages should be displayed for each invalid field, indicating the specific issue	Error messages are displayed for the invalid fields, specifying the errors.	Pass
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The screenshot shows an IDE with a project named 'smart-contract'. The left sidebar shows a file tree with files like 'keri.hs', 'StakeReward.hs', 'SmartContract.zip', 'SmartContractTest.zip', 'Spec.hs', '.gitignore', 'aphpa.plutus', 'cabal.project', 'LICENSE', 'new-template.cabal', 'pcMint.plutus', 'README.md', and 'Readme.md'. The main editor shows a Haskell code snippet with line numbers 14, 45, 46, 47, 48, and 49. The code includes 'common', 'common-all', 'directory', 'filepath', 'base16-bytestring', and 'quickcheck-instances'. The terminal window shows the following output:

```

PROBLEMS 24 OUTPUT DEBUG CONSOLE TERMINAL TEST RESULTS PORTS GITHD cabal - smart-contract + v
- tasty-quickcheck-0.10.2
- tasty-1.4.3
- quickcheck-instances-0.3.29
- plutus-tx-plugin-1.0.0.0
- plutus-script-utils-1.2.0.0
- QuickCheck-2.14.2
Ok, one module loaded.
SmartContract.PCMintV2> main
Enter recipient PubKeyHash (hex-encoded):
22c7f1d84e95d7f95c8b00d926db3d6dde0bfff6844844b9780eef2^??
Enter amount (how many NFTs to mint):
2
Enter nftData (hex-encoded, e.g., 436172626f6e):
436172626f6e34e
Enter output file path (e.g., Plastik/PCMint.plutus):
/home/ravindra-singh/Work/refi-5/smart-contract/pcMint.plutus
Error: Invalid hex input for recipientId or nftData.
SmartContract.PCMintV2>

```

5	PlastiksCryp toV2	Submit a request with valid data	1. Enter the valid admin public key hash 2. Enter the file output path	The file should be updated with the CBOR hex.	The file is updated with the CBOR hex.	pass
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```

14 common common-all
46 filepath,
47 base16-bytestring,
48 quickcheck-instances
49
PROBLEMS 35 OUTPUT DEBUG CONSOLE TERMINAL TEST RESULTS PORTS GITHD cabal - smart-contract + -

<no location info>: warning: [-Wunused-packages]
The following packages were specified via -package or -package-id flags,
but were not needed for compilation:
- tasty-quickcheck-0.10.2
- tasty-1.4.3
- quickcheck-instances-0.3.29
- plutus-script-utils-1.2.0.0
- QuickCheck-2.14.2
Ok, one module loaded.
SmartContract.PlastikCryptoV2> main
Enter admin PubKeyHash (hex):
22c7f1d84e95d7f95c8b00d926db3d6dde0bffffe6844844b9780eef2
Enter output filepath (e.g. compiled/PlastikCryptoV2.plutus):
/home/ravindra-singh/Work/refi-5/smart-contract/pcMint.plutus
Validator written successfully!
SmartContract.PlastikCryptoV2>

```

6	PlastiksCryp toV2	Submit a request with invalid data	1. Enter an invalid admin public key hash (non- Hex or incorrect format) 2. Enter an invalid or inaccessible file output path	An error message should be displayed indicating the invalid field(s) and preventing file update.	Error messages are displayed for the invalid fields, and the file is not updated	Pass
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```

14 common common-all
46 filepath,
47 base16-bytestring,
48 quickcheck-instances
49
PROBLEMS 35 OUTPUT DEBUG CONSOLE TERMINAL TEST RESULTS PORTS GITHD cabal - smart-contract + -

<no location info>: warning: [-Wunused-packages]
The following packages were specified via -package or -package-id flags,
but were not needed for compilation:
- tasty-quickcheck-0.10.2
- tasty-1.4.3
- quickcheck-instances-0.3.29
- plutus-tx-plugin-1.0.0.0
- plutus-script-utils-1.2.0.0
- QuickCheck-2.14.2
Ok, one module loaded.
SmartContract.PlastikCryptoV2> main
Enter admin PubKeyHash (hex):
22c7f1d84e95d7f95c8b00d926db3d6dde0bffffe6844844b9780eef2^?^?^?
Enter output filepath (e.g. compiled/PlastikCryptoV2.plutus):
/home/ravindra-singh/Work/refi-5/smart-contract/pcMint.plutus
Invalid hex input: invalid bytestring size
SmartContract.PlastikCryptoV2>

```

```

14 common common-all
52
53 library
54 import: common-all, base
55
56 if flag(unexpected, thunk)

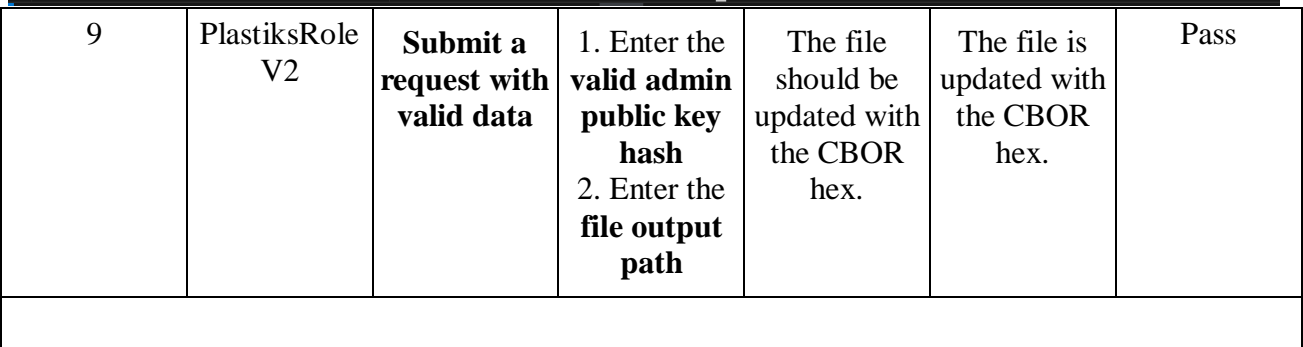
PROBLEMS 35 OUTPUT DEBUG CONSOLE TERMINAL TEST RESULTS PORTS GITHD cabal - smart-contract + v

<no location info>: warning: [-Wunused-packages]
The following packages were specified via -package or -package-id flags,
but were not needed for compilation:
- tasty-quickcheck-0.10.2
- tasty-1.4.3
- quickcheck-instances-0.3.29
- plutus-script-utils-1.2.0.0
- QuickCheck-2.14.2
Ok, one module loaded.
SmartContract.PlastikPRGV3OnChain> main
Enter admin PubKeyHash (hex):
22c7f1d84e95d7f95c8b00d926db3d6dde0bffe6844844b9780eef2
Enter output filepath (e.g. compiled/PlastikPRGV3.plutus):
/home/ravindra-singh/Work/refi-5/smart-contract/pcMint.plutus
Validator written successfully!
SmartContract.PlastikPRGV3OnChain>

```

7	PlastiksPRG V3OnChian	Submit a request with valid data	1. Enter the valid admin public key hash 2. Enter the file output path	The file should be updated with the CBOR hex.	The file is updated with the CBOR hex.	Pass

8	PlastikPRG V3OnChain	Submit a request with invalid data	1. Enter an invalid admin public key hash (non-Hex or incorrect value)	An error message should be displayed indicating the invalid field(s) and preventing file update	Error messages are displayed for the invalid fields, and the file is not updated	Pass
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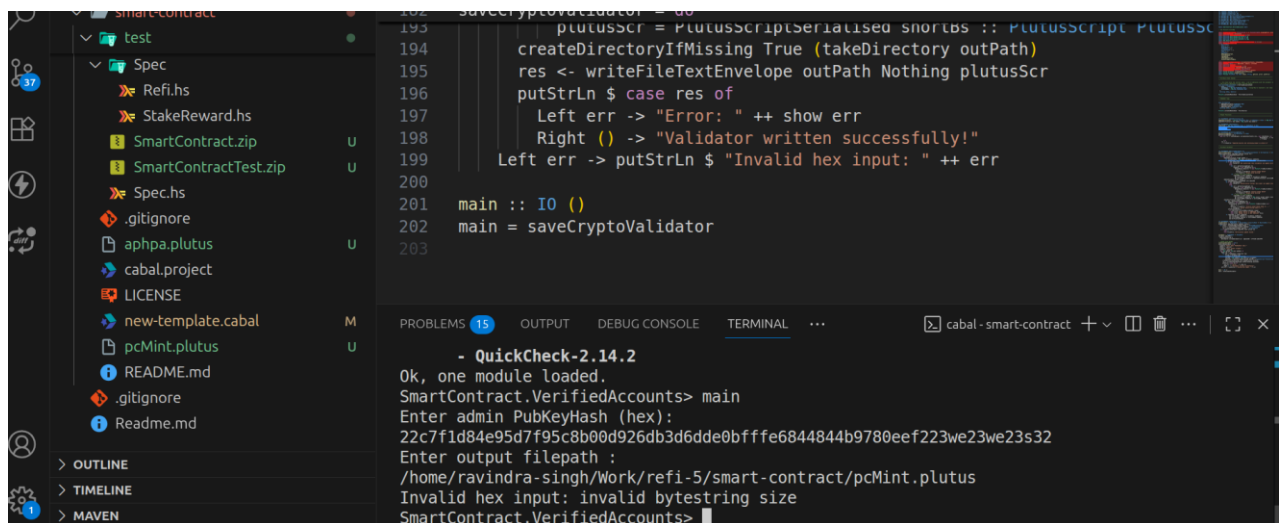
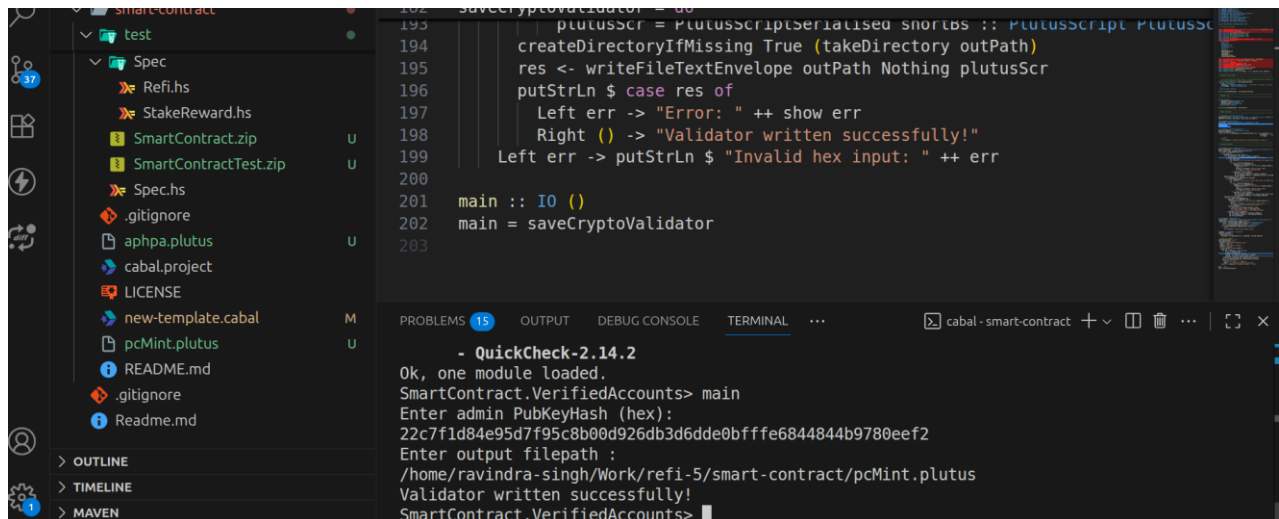
10	PlastiksRole V2	Submit a request with invalid data	1. Enter the invalid admin public key hash 2. Enter the file output path	An error message should be displayed indicating the invalid field(s) and preventing file update	Error messages are displayed for the invalid fields, and the file is not updated	Pass
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```

- QuickCheck-2.14.2
Ok, one module loaded.
SmartContract.PlastikRoleV2> main
Enter Admin PubKeyHash (hex-encoded):
c7f1d84e95d7f95c8b00d926db3d6dde0bffffe6844844b9780kfjsdlkj34234jfiadlsjfoiwuw
Enter output file path (e.g., Plastik/PlastikRoleV2.plutus):
/home/ravindra-singh/Work/refi-5/smart-contract/pcMint.plutus
Error: Invalid hex input for admin PubKeyHash.
SmartContract.PlastikRoleV2>

```

11	VerifiedAcco unts	Submit a request with valid data	1. Enter the valid admin public key hash 2. Enter the file output path	The file should be updated with the CBOR hex.	The file is updated with the CBOR hex.	Pass
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12	VerifiedAccounts	Submit a request with invalid data	1. Enter the invalid admin public key hash 2. Enter the file output path	An error message should be displayed indicating the invalid field(s) and preventing file update	Error messages are displayed for the invalid fields, and the file is not updated	Pass
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The screenshot shows an IDE with a Haskell project. The left sidebar shows a file explorer with files like `StakeReward.hs`, `SmartContract.zip`, `SmartContractTest.zip`, `Spec.hs`, `.gitignore`, `aphpa.plutus`, `cabal.project`, `LICENSE`, `new-template.cabal`, `pcMint.plutus`, `README.md`, `.gitignore`, and `Readme.md`. The main editor shows Haskell code for `SmartContract.WhiteListSender`. The terminal window shows the output of a QuickCheck test:

```

- QuickCheck-2.14.2
Ok, one module loaded.
SmartContract.WhiteListSender> main
Enter admin PubKeyHash (hex):
22c7f1d84e95d7f95c8b00d926db3d6dde0bffe6844844b9780eef2
Enter output filepath:
/home/ravindra-singh/Work/refi-5/smart-contract/pcMint.plutus
Successfully wrote WhiteList validator.
SmartContract.WhiteListSender>

```

13	WhiteListSender	Submit a request with valid data	1. Enter the valid admin public key hash 2. Enter the file output path	The file should be updated with the CBOR hex.	The file is updated with the CBOR hex.	Pass
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14	WhiteListSender	Submit a request with invalid data	1. Enter the invalid admin public key hash 2. Enter the file output path	An error message should be displayed indicating the invalid field(s) and preventing file update	Error messages are displayed for the invalid fields, and the file is not updated	Pass
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smart-contract

test

Spec

kefi.hs

StakeReward.hs

SmartContract.zip

SmartContractTest.zip

Spec.hs

.gitignore

aphpa.plutus

cabal.project

LICENSE

new-template.cabal

pcMint.plutus

README.md

.gitignore

Readme.md

OUTLINE

TIMELINE

MAVEN

plutus-tx-1.0.0.0

plutus-script-utils-1.2.0.0

plutus-ledger-api-1.0.0.1

filepath-1.4.2.1

directory-1.3.6.0

cardano-api-1.35.4

bytestring-0.10.12.0

base16-bytestring-1.0.2.0

QuickCheck-2.14.2

<no location info>: warning: [-Wunused-packages]

The following packages were specified via -package or -package-id flags,

but were not needed for compilation:

tasty-quickcheck-0.10.2

tasty-1.4.3

quickcheck-instances-0.3.29

plutus-tx-plugin-1.0.0.0

base16-bytestring-1.0.2.0

QuickCheck-2.14.2

Ok, one module loaded.

SmartContract.PlastikRecoveryProjects> writeScript "22c7f1d84e95d7f95c8b00d926db3d6dde0bffffe6844844b9780eef2sjoiewutjfalksjfjfaslfjaskdjflvanlksdjkkdslaifaklsfjskf"

*** Exception: not a hexit: 's'

CallStack (from HasCallStack):

error, called at src/Data/Either/Extras.hs:6:34 in plutus-ledger-api-1.0.0.1-35b7647b811c2b01284e01f803aa31115edf19b39af1f67a42a0daabb90c5bf5:Data.Either.Extras

SmartContract.PlastikRecoveryProjects>