***1. A system designed for replenishing mobile phone where min replenishment is 5$ and max replenishment is 1000$. There is no commission if user enters less than 50$. User will pay 1% of replenishment when it is less than 500$. In case the replenishment is equal or bigger than 500$, the user will pay 3% of commission.***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Invalid** | **Valid without commission** | **Valid for 1% commission** | **Valid for 3% commission** | **Invalid** |
| **Class** | $0-4 | $5-49 | $50-499 | $500-1000 | >=1001 |
| **EP** | 2 | 24 | 230 | 750 | 2000 |
| **BVA** | 0 4 | 5 49 | 50 499 | 500 1000 | 1001 |

**Equivalence Partitioning**

|  |  |  |
| --- | --- | --- |
| **#** | **Condition** | **Expected Result** |
| **1** | Put value ‘2’ into input field | Error message: Error message appears "You have entered an incorrect value for the amount of deposited money". |
| **2** | Put value ‘24’ into input field | Mobile phone replenished without commission |
| **3** | Put value ‘230’ into input field | Mobile phone replenished with a commission of 1% |
| **4** | Put value ‘750’ into input field | Mobile phone replenished with a commission of 3% |
| **5** | Put value ‘2000’ into input field | Error message: Error message appears "You have entered an incorrect value for the amount of deposited money". |
| **6** | Put value ‘aBc’ into input field | Error message: Error message appears "You have entered an incorrect value". |
| **7** | Put value ‘@+\_=$%’ into input field | Error message: Error message appears "You have entered an incorrect value". |

**Boundary Values Analysis**

|  |  |  |  |
| --- | --- | --- | --- |
| **#** | **Condition** | | **Expected Result** |
| **1** | Put value ‘0’ into input field | | Error message: Error message appears "You have entered an incorrect value for the amount of deposited money". |
| **2** | Put value ‘4’ into input field | | Error message: Error message appears "You have entered an incorrect value for the amount of deposited money". |
| **3** | Put value ‘5’ into input field | | Mobile phone replenished without commission |
| **4** | Put value ‘49’ into input field | | Mobile phone replenished without commission |
| **5** | Put value ‘50’ into input field | | Mobile phone replenished with a commission of 1% |
| **6** | Put value ‘499’ into input field | | Mobile phone replenished with a commission of 1% |
| **7** | Put value ‘500’ into input field | | Mobile phone replenished with a commission of 3% |
| **8** | Put value ‘1000’ into input field | | Mobile phone replenished with a commission of 3% |
| **9** | Put value ‘1001’ into input field | | Error message: Error message appears "You have entered an incorrect value for the amount of deposited money". |
| **10** | Put value ‘aBc’ into input field | Error message: Error message appears "You have entered an incorrect value". | |
| **11** | Put value ‘@+\_=$%’ into input field | Error message: Error message appears "You have entered an incorrect value". | |

***2. You want to buy travel card of some transport network (works during 1 month). The following types of discount exist:***

***-*** ***For Student –*** ***gives you 20% discount if you are student;***

***- Pensioner– gives you 10% discount, available if you are 60 years old and more (cannot be used with Student discount)***

***You can get additional 5% discount if you are buying such travel cards during the last 6 months in a row.***

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Сouses(inputs)** | **R1** | **R2** | **R3** | **R4** | **R5** | **R6** | **R7** | **R8** |
| **Student card (20%)** | **Y** | **Y** | **N** | **N** | **N** | **Y** | **Y** | **N** |
| **Pensioner travel card (10%)** | **N** | **N** | **Y** | **Y** | **N** | **Y** | **Y** | **N** |
| **Bought such travel cards during the last 6 months in a row(5%)** | **N** | **Y** | **N** | **Y** | **N** | **Y** | **N** | **Y** |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Effects (outputs)** | | | | | | |  | |
| Discount(%) | 20 | 25 | 10 | 15 | 0 | 35 | 30 | 5 |
| Error |  |  |  |  |  | + | + | + |

|  |  |  |  |
| --- | --- | --- | --- |
| # | | **Condition** | **Outcome** |
| **1** | | A person having student card | A card will be given with a 20% discount |
| **2** | | A person having student card and bought such travel cards during the last 6 months in a row. | A card will be given with a 25% discount |
| **3** | | A person who has pensioner travel card. | A card will be given with a 10% discount |
| **4** | | A person who has pensioner travel card and also bought such travel cards during the last 6 months in a row. | A card will be given with a 15% discount |
| 5 | A person having no travel cards | | No discount (0%) |
| 6 | A person having all travel cards | | Pensioner card cannot be used with Student card |
| *7* | A person having student card and pensioner travel card | |  |
| *8* | Pensioner travel card | |  |

***3.State transition***

*User wants to pay for using the Internet with Payment card. He enters amount of money he needs to pay, e-mail and press the “Next” button. If entered amount of money is not allowed the user will be asked to correct the sum. In other case will be redirected on payment page. On this page user should enter the 16-digit number of card, period of validity and code of CVV2/CVC2 and then press “Pay”. If entered info is correct user will get email-notification on his email that operation completed success. If some data were entered incorrectly, user will get error-notification on the screen and he should correct it and again press “Pay”.*

**Message: «Correсt amount»**

**Enter the amount, email and click 'Next'**

Enter amount, e-mail and click ‘Next Amount wasn’t accepted

**Redirected to payment page**

Data was accepted Amound was

corrected and

accepted

Entered 16-digit number of card,

**Error message:”Fix the Data”**

period of validity and code

CVV2/CVC2 wasn’t accepted

Entered correct 16-digit number of card, period of

validity and code of CVV2/CVC2 Entered correct 16-digit number of card, period of and then press “Pay” validity and code of CVV2/CVC2 and then press “Pay”

**Sent an e-mail: “The operation was completed successfully**”

Successful payment

**Enter the amount, email and click 'Next'**

Enter amount, e-mail and click ‘Next

Data was accepted

**Redirected to payment page**

Entered correct 16-digit number of card, period of

validity and code of CVV2/CVC2

and then press “Pay”

**Sent an e-mail: “The operation was completed successfully**”

Successful payment

**1.Verify that user will pay for using the Internet if he enters correct all data.**

**Enter the amount, email and click 'Next'**

Enter amount, e-mail and click ‘Next

**Redirected to payment page**

Data was accepted

Entered 16-digit number of card,

**Erro message:”Fix the Data”**

period of validity and code

CVV2/CVC2 wasn’t accepted

Entered correct 16-digit number of card, period of validity and code of CVV2/CVC2

and then press “Pay”

**Sent an e-mail: “The operation was completed successfully**”

Successful payment

**2. Verify that user will pay for using the Internet if he enters correct amount and doesn’t correct 16-digit number of card, period of validity and code of CVV2/CVC2.**

**Message: «Correсt amount»**

**Enter the amount, email and click 'Next'**

Enter amount, e-mail and click ‘Next Amount wasn’t accepted

**Redirected to payment page**

Amound was

corrected and

accepted

Entered correct 16-digit number of card, period of

validity and code of CVV2/CVC2 and then press “Pay”

**Sent an e-mail: “The operation was completed successfully**”

Successful payment

**3. Verify that user will pay for using the Internet if he enter doesn’t correct amount and correct 16-digit number of card, period of validity and code of CVV2/CVC2.**

**Message: «Correсt amount»**

**Enter the amount, email and click 'Next'**

Enter amount, e-mail and click ‘Next Amount wasn’t accepted

**Redirected to payment page**

Amound was

corrected and

accepted

Entered 16-digit number of card,

**Error message:”Fix the Data”**

period of validity and code

CVV2/CVC2 wasn’t accepted

Entered correct 16-digit number of card, period of validity and code of CVV2/CVC2

and then press “Pay”

**Sent an e-mail: “The operation was completed successfully**”

Successful payment

**4. Verify that user will pay for using the Internet if he enter doesn’t correct amount and doesn’t correct 16-digit number of card, period of validity and code of CVV2/CVC2.**