Engenharia de Software II

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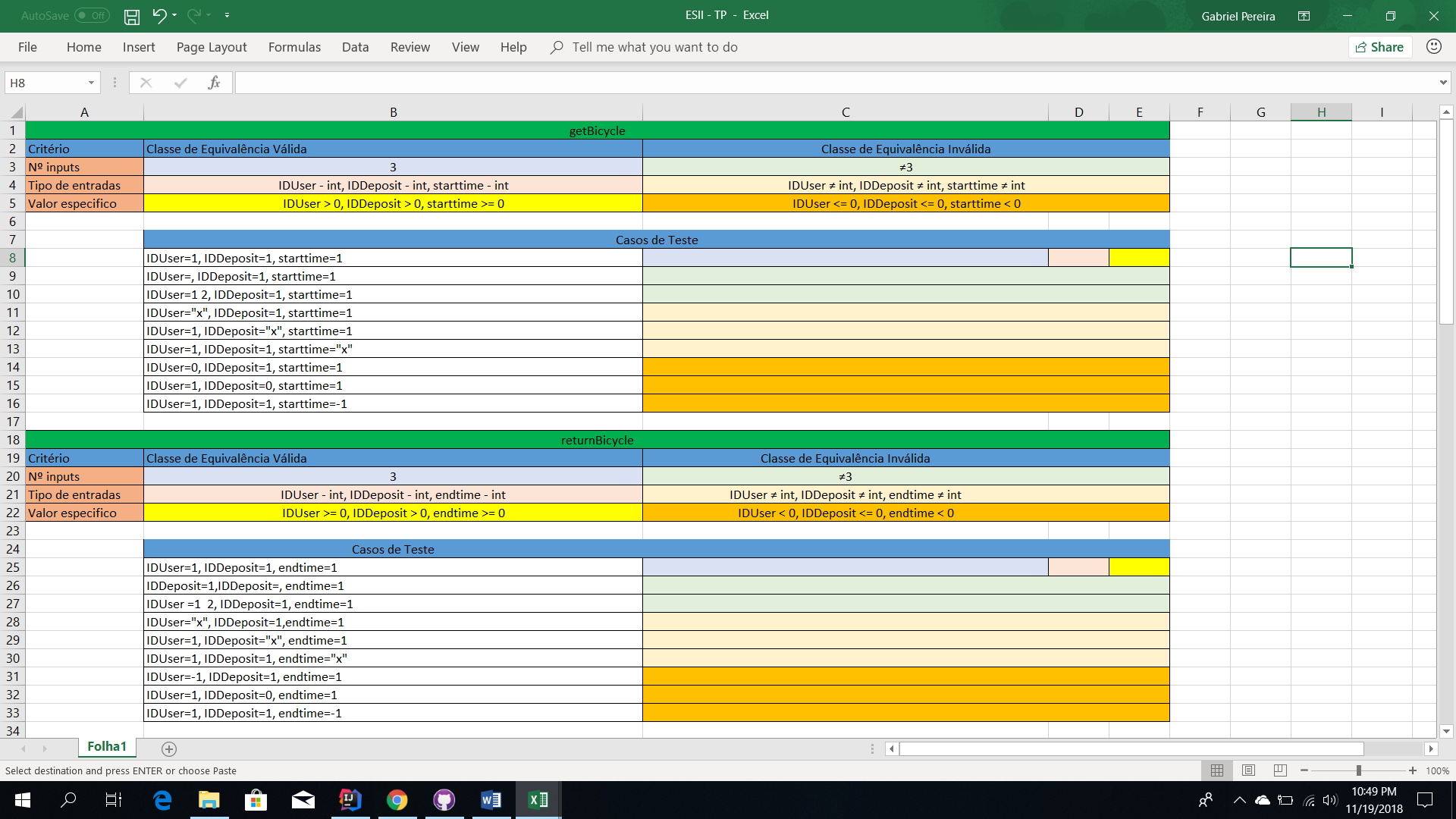
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# 

# Introdução

# Metódo getBicycle

## Tabela ECP

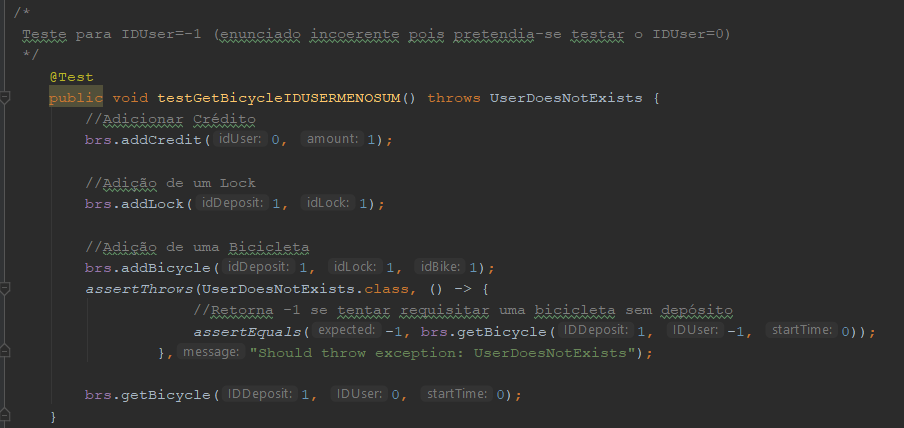


## Tabela BVA

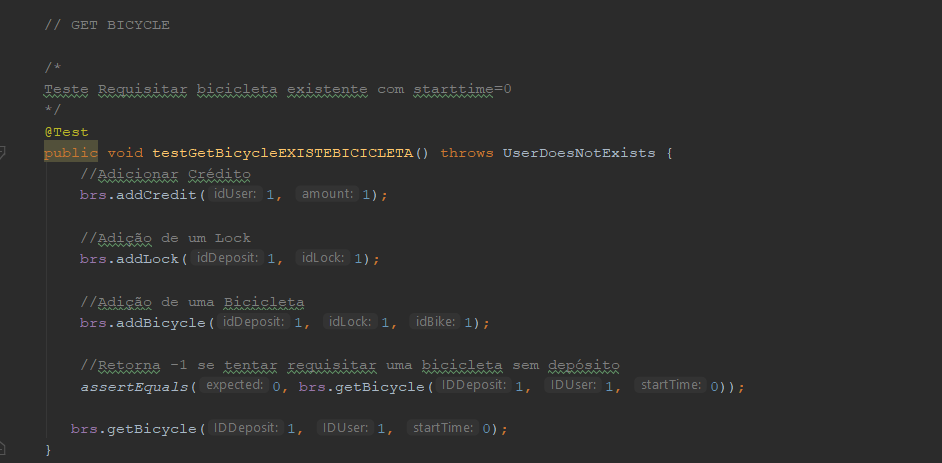
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Método | getBicycle | | | | |
|  |  |  |  |  |  |
| Cenários |  |  |  |  |  |
| 1 | IDUser>0, IDDeposit >0, starttime>=0 | | | | |
| 2 | IDUser=<0, IDDeposit >0, , starttime>=0 | | | | |
| 3 | IDUser>0, IDDeposit=<0, , starttime>=0 | | | | |
| 4 | IDUser>0, IDDeposit>0, , starttime<0 | | | | |
|  |  |  |  |  |  |
| Casos de Teste | Input | | |  | Output |
|  | **IDUser** | **IDDeposit** | **starttime** |  |  |
| 1 | 1 | 1 | 0 |  | identificador da bicicleta que será utilizada |
| 2 | 0 | 1 | 0 |  | -1 |
| 3 | 1 | 1 | 0 |  | identificador da bicicleta que será utilizada |
| 4 | 1 | 0 | 0 |  | -1 |
| 5 | 1 | 1 | -1 |  | -1 |
| 6 | 1 | 1 | 0 |  | identificador da bicicleta que será utilizada |
| 7 | 1 | 1 | 1 |  | identificador da bicicleta que será utilizada |

## Casos de teste

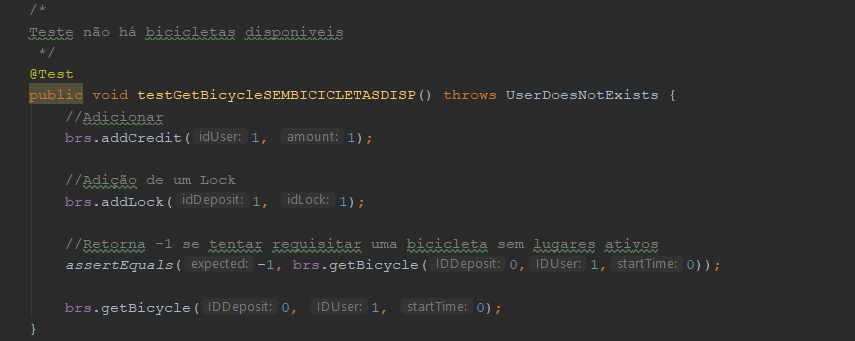
## Caso de teste 0 (testGetBicycleUSERMENOSUM)



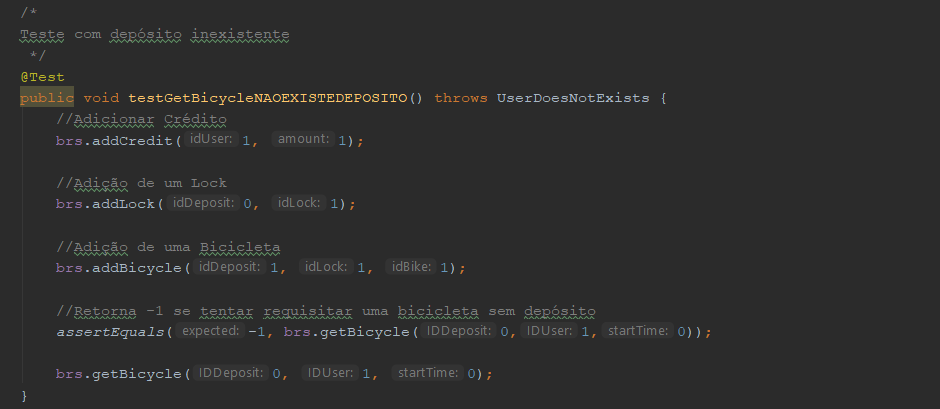
## Caso de teste 1/3/6 (testGetBicycleEXISTEBICICLETA)



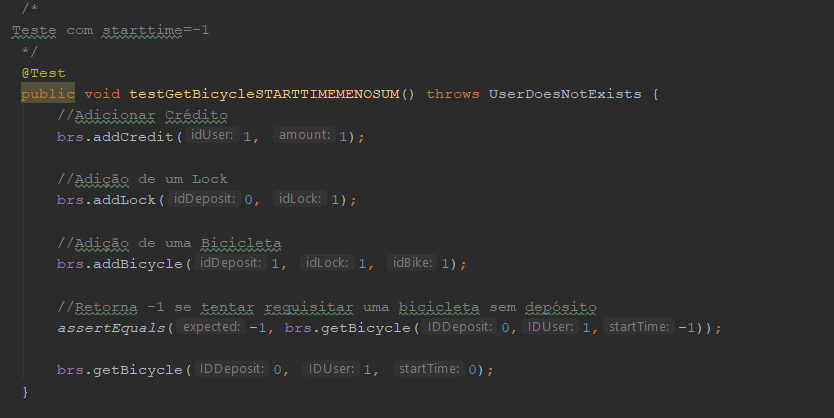
## Caso de teste 4 (testGetBicucleSEMBICICLETASDISP)



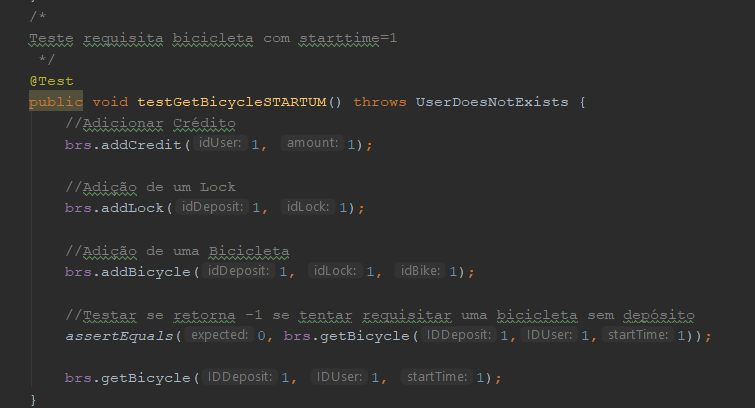
## Caso de teste 4 (testGetBicycleNAOEXISTEDEPOSITO)



## Caso de teste 5 (testGetBicycleSTARTTIMEMENOSUM)

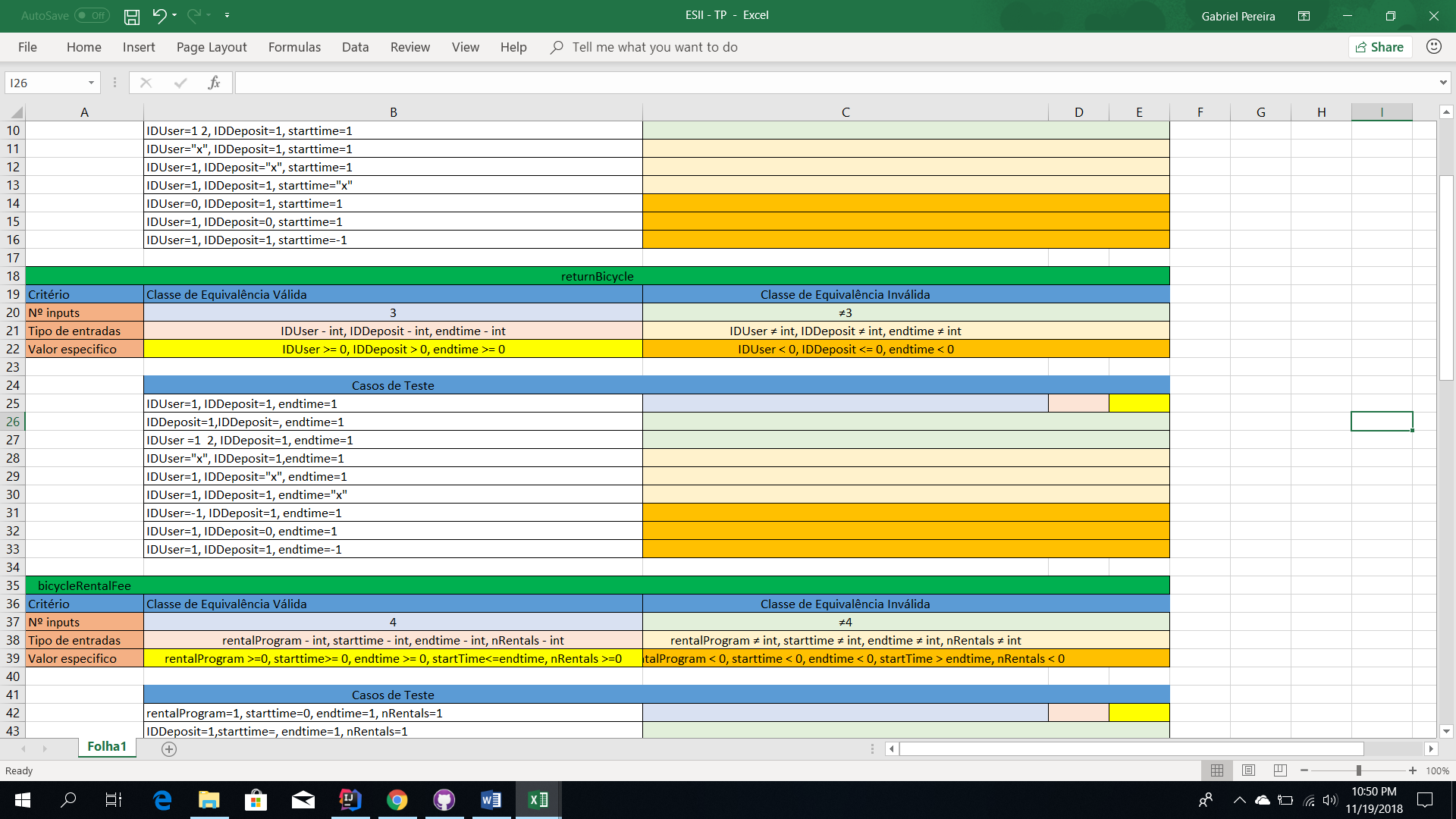


## Caso de teste 7 (testGetBicycleSTARTUM)



# Metódo returnBikycle

## Tabela ECP



## Tabela BVA

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Método | returnBikycle | | | | |
|  |  |  |  |  |  |
| Cenários |  |  |  |  |  |
| 1 | IDUser>=0, IDDeposit >0, endtime>=0 | | | | |
| 2 | IDUser<0, IDDeposit >0, , endtime>=0 | | | | |
| 3 | IDUser>0, IDDeposit=<0, , endtime>=0 | | | | |
| 4 | IDUser>0, IDDeposit>0, , endtime<0 | | | | |
|  |  |  |  |  |  |
| Casos de Teste | Input | | |  | Output |
|  | **IDUser** | **IDDeposit** | **endtime** |  |  |
| 1 | 1 | 1 | 1 |  | Saldo atual |
| 2 | 0 | 1 | 1 |  | Saldo atual |
| 3 | -1 | 1 | 1 |  | -1 |
| 4 | 1 | 1 | 1 |  | Saldo atual |
| 5 | 1 | 0 | 1 |  | -1 |
| 6 | 1 | 1 | 1 |  | Saldo atual |
| 7 | 1 | 1 | 0 |  | Saldo atual |
| 8 | 1 | 1 | -1 |  | -1 |

## Caso de teste 1 (testReturnBicycleRETORNASALDOUSERUM)

## Caso de teste 2 (testReturnBicycleRETORNASALDOUSEROZERO)

## Caso de teste 3 (testReturnBicycleUSERNAOEXISTE)

## 

## Caso de teste 1/4/6 (testReturnBicycleDEPOSITEXISTE)

## 

## Caso de teste 5 (testReturnBicycleDEPOSITNAOEXISTE)

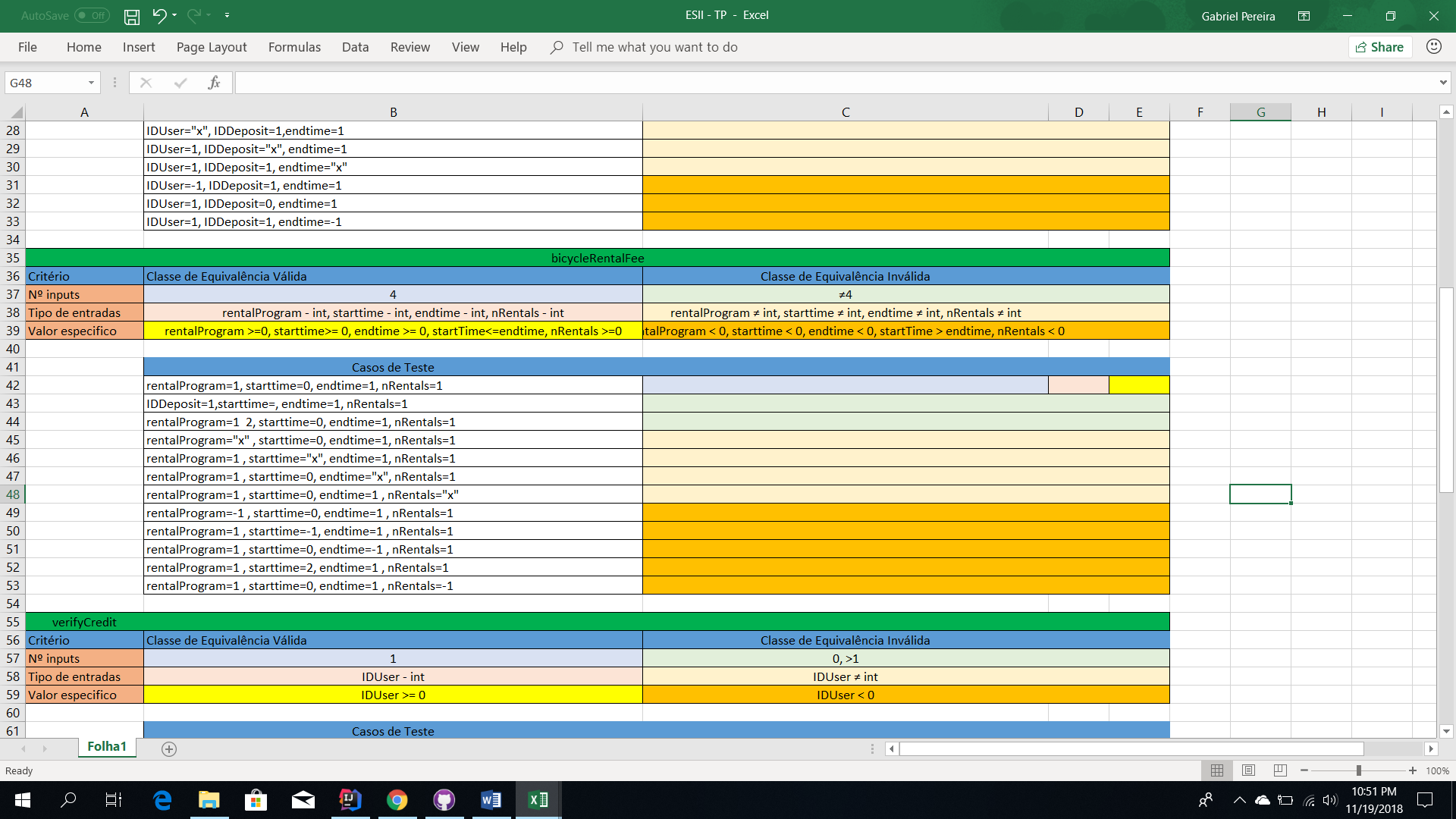
## 

## Caso de teste 8 (testReturnBicycleSEMLUGARESLIVRES)

## 

# Metódo bicycleRentalFee

## Tabela ECP

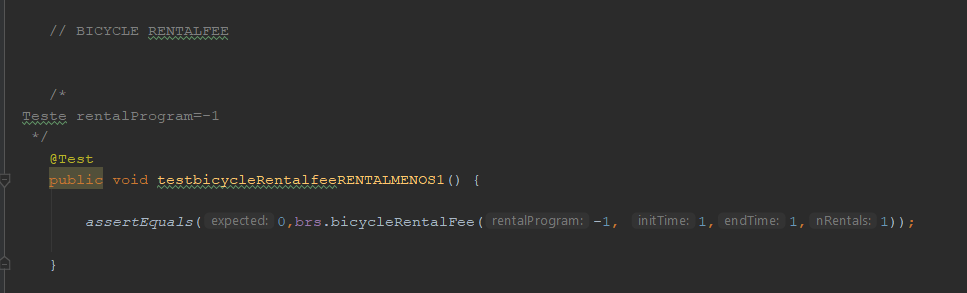


## Tabela BVA

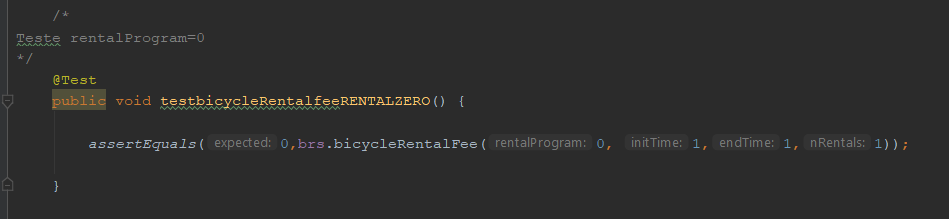
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Método | bicycleRentalFee | | | | |
|  |  |  |  |  |  |
| Cenários |  |  |  |  |  |
| 1 | rentalProgram >=0, starttime>=0, endtime>=0, starttime <=endtime, nRentals>=0 | | | | |
| 2 | rentalProgram <0, starttime>=0, endtime>=0, starttime <=endtime, nRentals>=0 | | | | |
| 3 | rentalProgram >=0, starttime<0, endtime>=0, starttime<=endtime, nRentals>=0 | | | | |
| 4 | rentalProgram >=0, starttime>=0, endtime<0, starttime <=endtime, nRentals>=0 | | | | |
| 5 | rentalProgram >=0, starttime<0, endtime>=0, starttime>endtime, nRentals>=0 | | | | |
| 6 | rentalProgram >=0, starttime>=0, endtime<0, starttime <=endtime, nRentals<0 | | | | |
|  |  |  |  |  |  |
| Casos de Teste | Input | | | | Output |
|  | **rentalProgram** | **starttime** | **endtime** | **nRentals** |  |
| 1 | -1 | 1 | 2 | 1 | 0 |
| 2 | 0 | 1 | 2 | 1 | 0 |
| 3 | 1 | 1 | 2 | 1 | valor referente ao programa de aluguer |
| 4 | 2 | 1 | 2 | 1 | valor referente ao programa de aluguer |
| 5 | 3 | 1 | 2 | 1 | 0 |
| 6 | 1 | -1 | 1 | 1 | 0 |
| 7 | 1 | 0 | 1 | 1 | valor referente ao programa de aluguer |
| 8 | 1 | 1 | 2 | 1 | valor referente ao programa de aluguer |
| 9 | 1 | 1 | -1 | 1 | 0 |
| 10 | 1 | 1 | 0 | 1 | 0 |
| 11 | 1 | 1 | 1 | 1 | valor referente ao programa de aluguer |
| 12 | 1 | 1 | 2 | -1 | 0 |
| 13 | 1 | 1 | 2 | 0 | valor referente ao programa de aluguer |
| 14 | 1 | 1 | 2 | 1 | valor referente ao programa de aluguer |

## Caso de teste

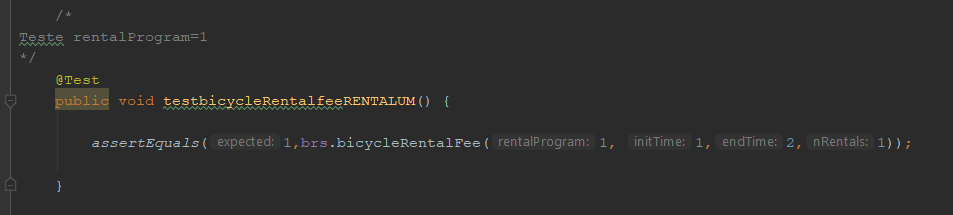
Caso de teste 1 – testbicycleRentalfeeRENTALMENOS1



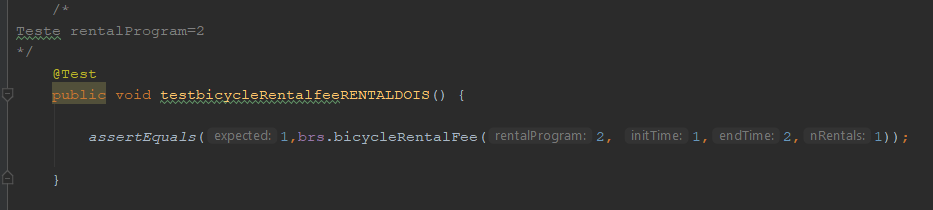
Caso de teste 2 – testbicycleRentalfeeRENTALZERO



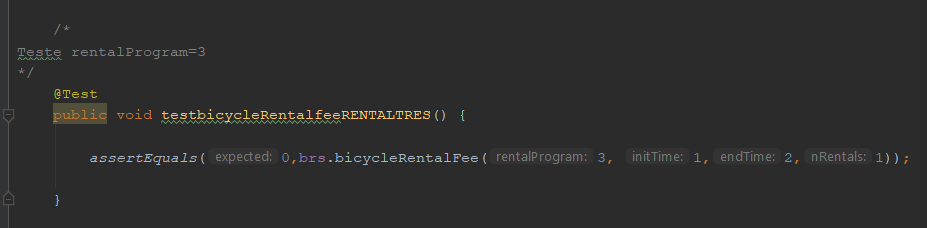
Caso teste 3/8/14 – testbicycleRentalfeeRENTALUM



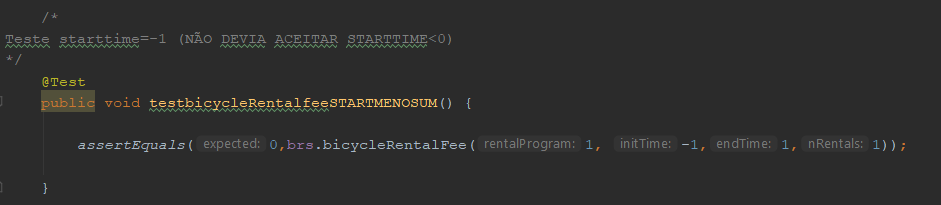
Caso teste 4 – testbicycleRentalfeeRENTALDOIS



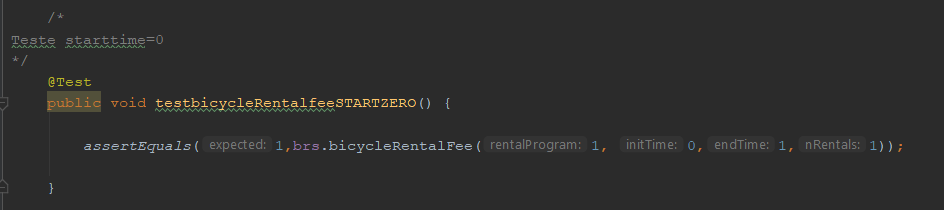
Caso teste 5 – testbicycleRentalfeeRENTALTRES

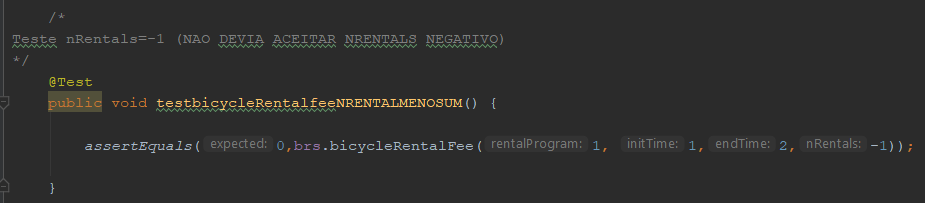


Caso de teste 6 – testbicycleRentalfeeSTARTMENOSUM

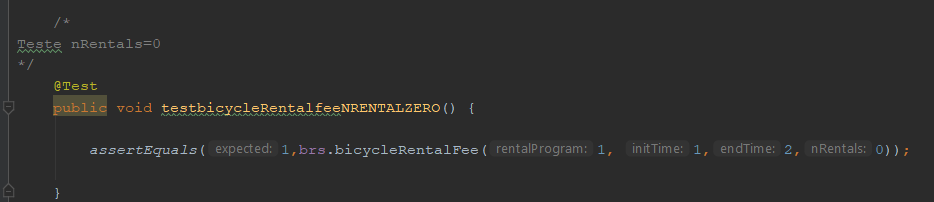


Caso de teste 7 – testbicycleRentalfeeSTARTZERO

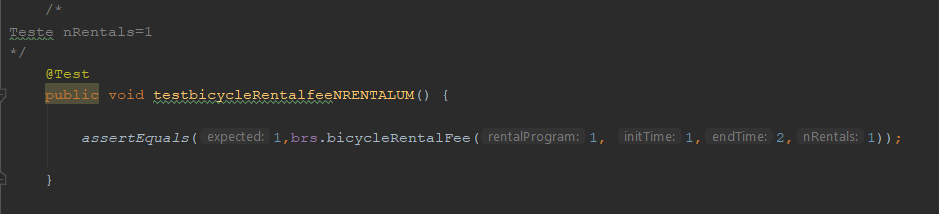


Caso de teste 9 – testbicycleRentalfeeNRENTALMENOSUM 

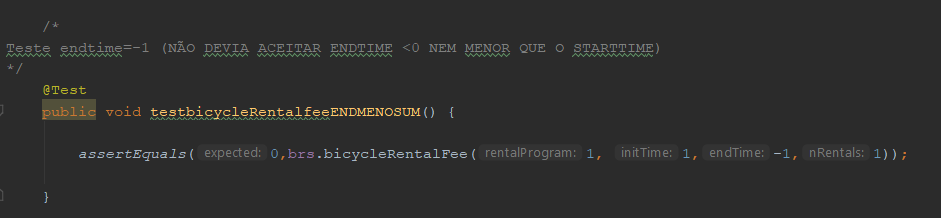
Caso de teste 10 – testbicycleRentalfeeNRENTALZERO



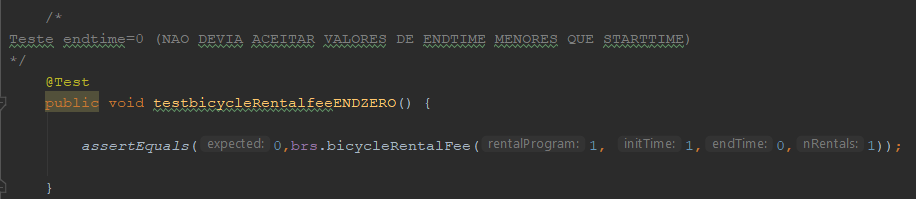
Caso de teste 11 – testbicycleRentalfeeNRENTALUM



Caso de teste 12 – testbicycleRentalfeeENDMENOSUM

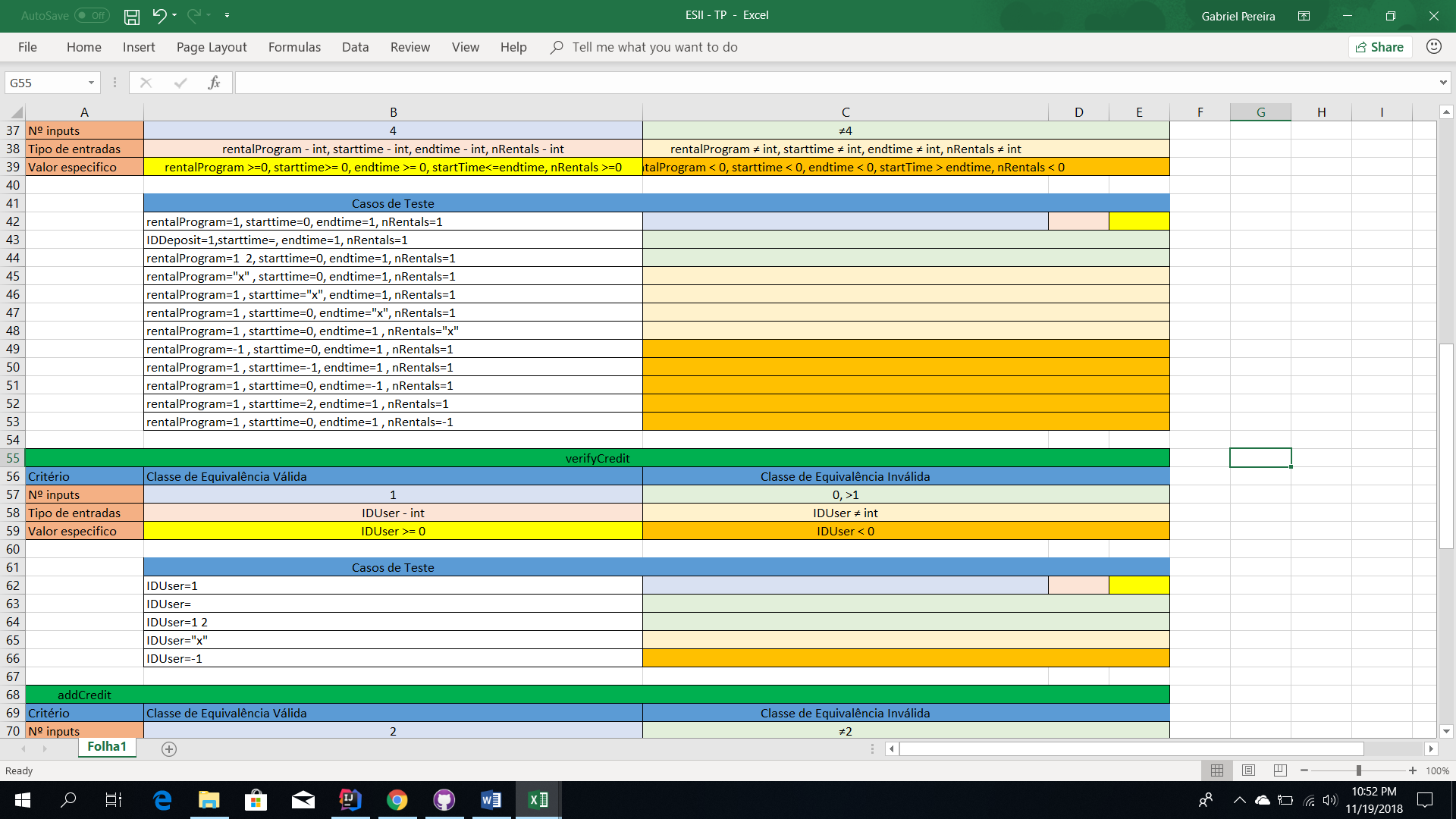


Caso de teste 13 – testbicycleRentalfeeENDZERO



## Metódo verifyCredit

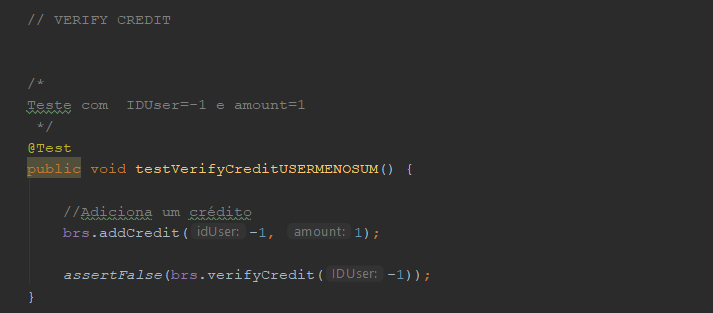
## Tabela ECP



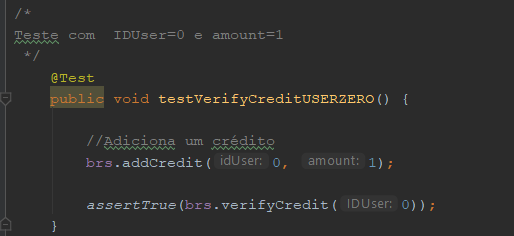
## Tabela BVA

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Método | verifyCredit | | | | |
|  |  |  |  |  |  |
| Cenários |  |  |  |  |  |
| 1 | O IDUser >=0 | | | | |
| 2 | O IDUser <0 | | | | |
|  |  |  |  |  |  |
| Casos de Teste | Input | | |  | Output |
|  | **IDUser** | | |  |  |
| 1 | -1 | | |  | FALSE |
| 2 | 0 | | |  | TRUE |
| 3 | 1 | | |  | TRUE |

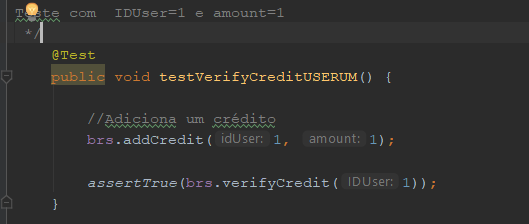
## Caso de teste 1 (testVerifyCreditUSERMENOSUM)



## Caso de teste 2 (testVerifyCreditUSERZERO)

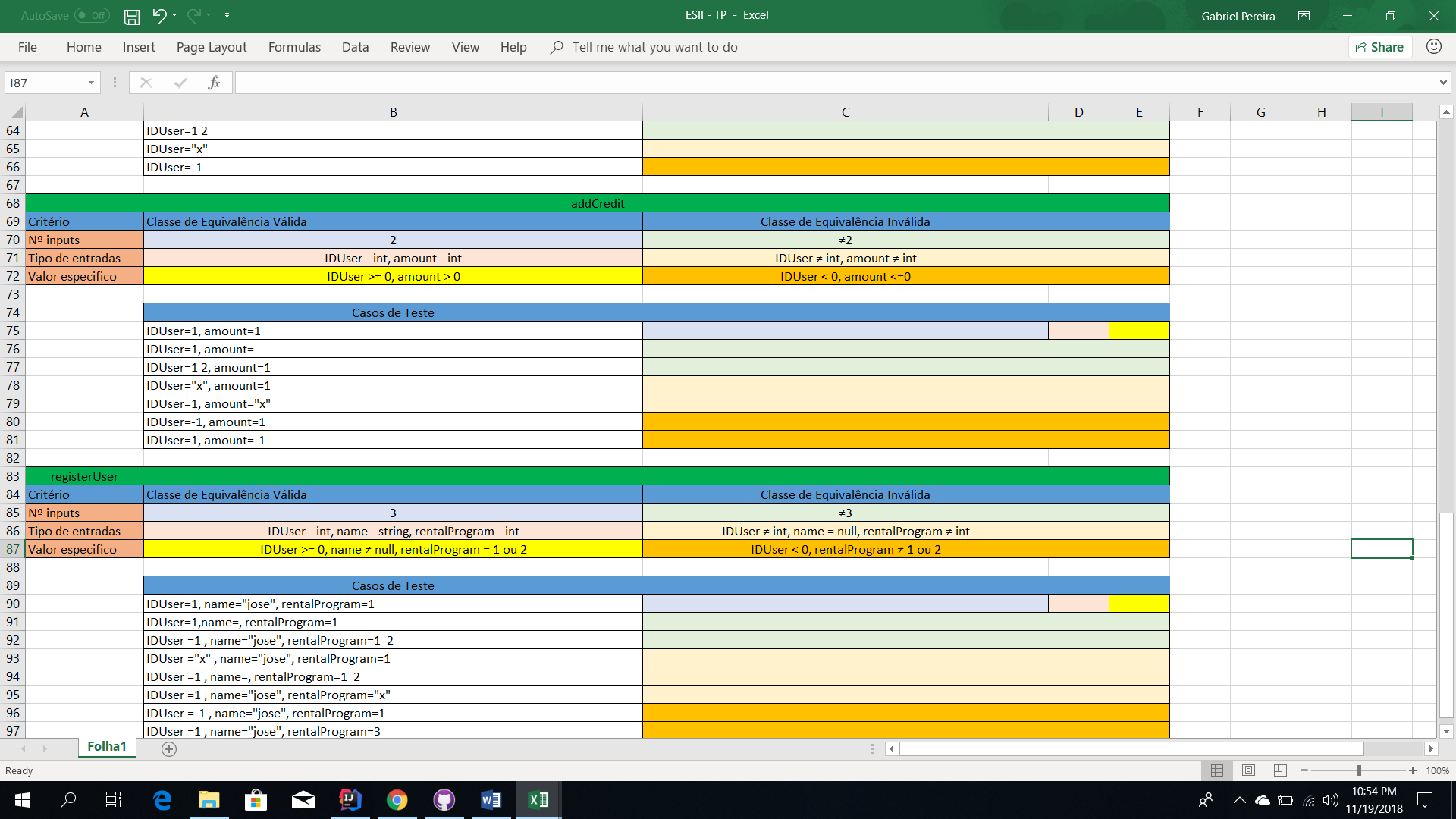


## Caso de teste 3 (testVerifyCreditUSERUM)



# Metódo addCredit

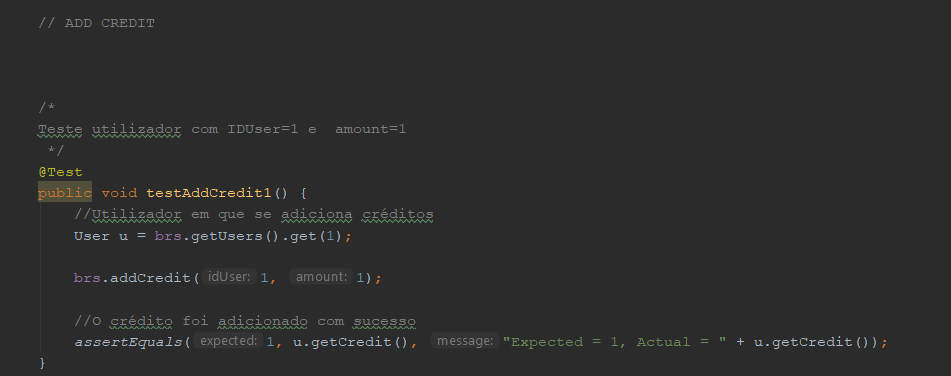
## Tabela ECP



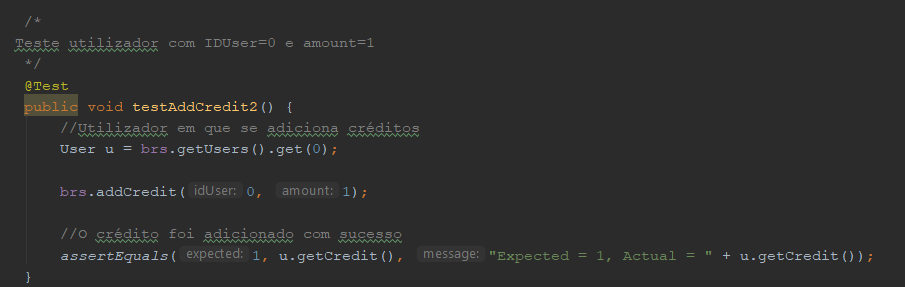
## Tabela BVA

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Método | addCredit | | | | |
|  |  |  |  |  |  |
| Cenários |  |  |  |  |  |
| 1 | IDUser>=0, amount > 0 | | | | |
| 2 | IDUser<0, amount > 0 | | | | |
| 3 | IDUser>=0, amount<=0 | | | | |
|  |  |  |  |  |  |
| Casos de Teste | Input | |  |  | Output |
|  | **IDUser** | **amount** |  |  |  |
| 1 | 1 | 1 |  |  | adicionar valor amount ao credito |
| 2 | 0 | 1 |  |  | adicionar valor amount ao credito |
| 3 | -1 | 1 |  |  | null |
| 4 | 1 | 1 |  |  | adicionar valor amount ao credito |
| 5 | 1 | 0 |  |  | 0 |

## Caso de teste 1/4 testAddCredit1



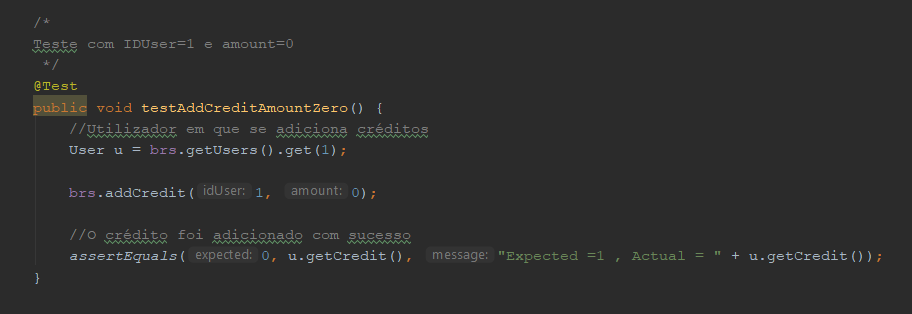
## Caso de teste 2 (testAddCredit2)



## Caso de teste 3 (testAddCreditMenosUM)

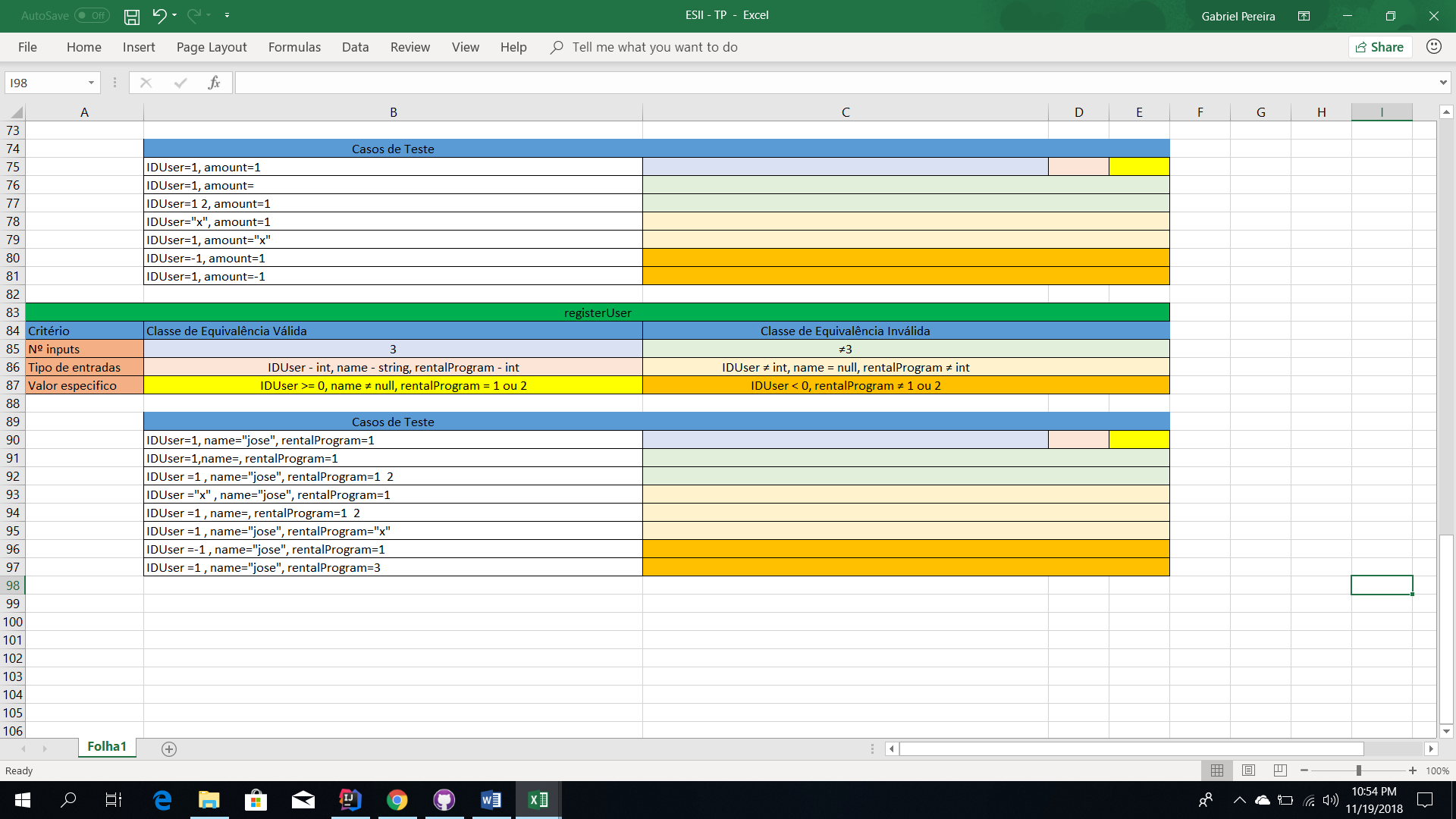


## Caso de teste 5 (testAddCreditAmountZero)



# Metódo registerUser

## Tabela ECP

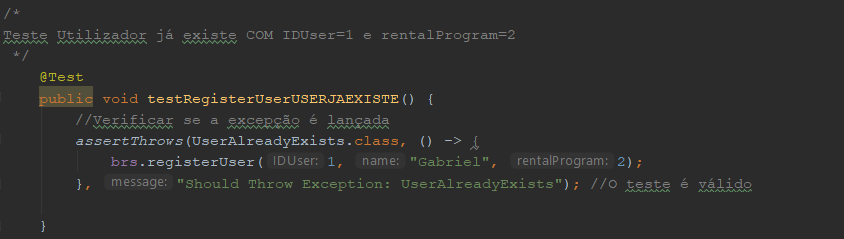


## Tabela BVA

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | registerUser | | | | |
|  |  |  |  |  |  |
| Cenários |  |  |  |  |  |
| 1 | IdUser>=0 , name !=null , rentalProgram=1 | | | | |
| 2 | IdUser<0 , name !=null , rentalProgram=1 | | | | |
| 3 | IdUser>=0 , name =null , rentalProgram=1 | | | | |
| 4 | IdUser>=0 , name !=null , rentalProgram=0 | | | | |
| 5 | IdUser>=0 , name !=null , rentalProgram=1 | | | | |
| 6 | IdUser>=0 , name !=null , rentalProgram=2 | | | | |
| 7 | IdUser>=0 , name !=null , rentalProgram=3 | | | | |
| 8 |  |  |  |  |  |
|  |  |  |  |  |  |
| Casos de Teste | Input | | |  | Output |
|  | **IDUser** | **name** | **rentalProgram** |  |  |
| 1 | 1 | !null | 1 |  | Cria utilizador |
| 2 | -1 | !null | 1 |  | Exception |
| 3 | 0 | !null | 1 |  | Cria utilizador |
| 4 | 1 | null | 1 |  | Exception |
| 5 | 1 | !null | 0 |  | Exception |
| 6 | 1 | !null | 1 |  | Cria utilizador |
| 7 | 1 | !null | 2 |  | Cria utilizador |
| 8 | 1 | !null | 3 |  | Exception |

## Caso de teste

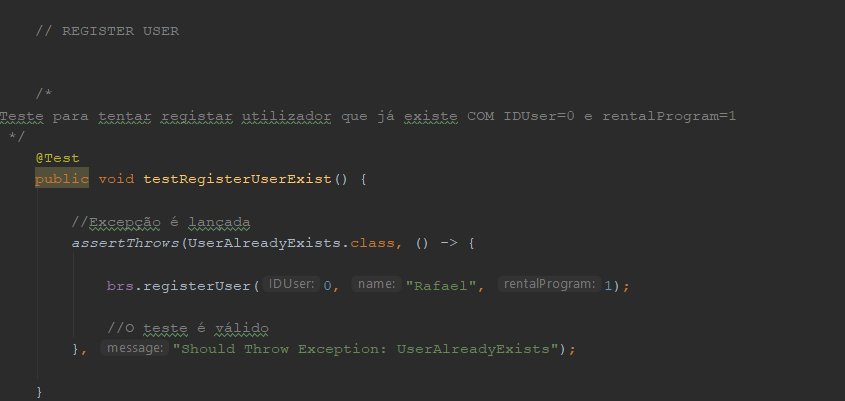
## Caso de teste 1 ( testRegisterUserUSERJAEXISTE)



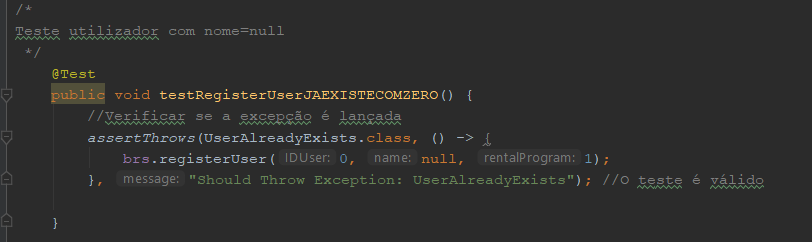
## Caso de teste 2 (testRegisterUserIDINVALIDO)



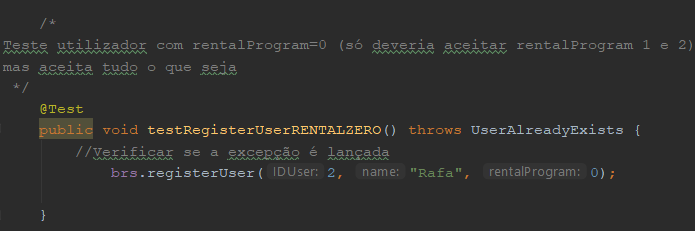
## Caso de teste 3 (testRegisterUserExist)



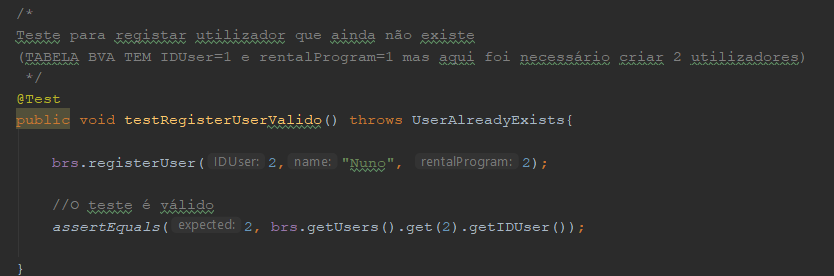
## Caso de teste 4 (testRegisterUserJAEXISTECOMZERO)



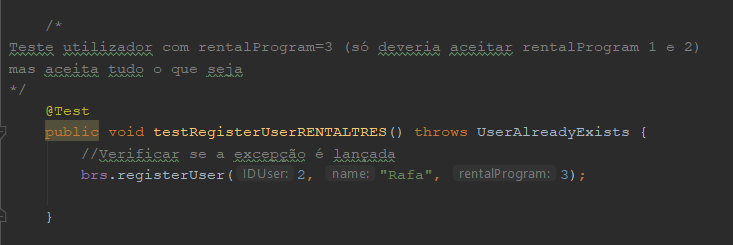
## Caso de teste 5 (testRegisterUserRENTALZERO)



## Caso de teste 6/7 (testRegisterUserValido)



## Caso de teste 8 (testRegisterUserRENTALRES)



# Conclusão