

C.A.R. Testing Coverage Plan

In order to ensure correctness in the C.A.R. app, we will use Unit Testing, implemented with JUnit, to test the Create Account, Login, Select Reservation, Personal Insurance Policy, Payment/Billing System, Maintain Payroll and Manage Personnel functions. These being the functions where a user, whether customer or administrator, could enter data that is invalid. We will run the following tests:

Create Account:

- All fields filled, through bounds checking
- Credit Card Number correct length and format, through bounds checking and passing bad data
- Account created upon button click, through action listeners
- Password meets criteria, through checking for required characters

Login:

- Username and Password correspond and are valid, through validating existence in database
- Login initiated upon button click, through action listeners

Select Reservation:

- Car is available for selected dates, through searching in all active reservations

Personal Insurance Policy:

- All fields filled, through bounds checking
- Insurance current, through validating expiration date is in the future

Payment/Billing Information:

- Administrator can edit bill but cannot delete, through entering null data

Maintain Payroll:

- Payment meets federal minimum wage, through testing invalid input
- Administrator cannot edit his/her own payroll, through bounds checking
- Hours logged does not exceed possible hours, through bounds checking

Manage Personnel

- Employee profiles cannot be duplicated, through testing invalid input
- New Employee profile must be complete, through bounds checking