| *Function Name* | *Test ID* | *Description* | *Status* | *Test Data 1* | *Test Data 2* | *Test Data 3* | *Test Data 4* | *Test Data 5* | *Expected output* |
|---|---|---|---|---|---|---|---|---|---|
| **login** | | **These Tests Test the login function and checks if it returns a user as an output** | | **Username** | **Password** | | | | |
| | customerlogin01 | The username is right and password is wrong, should return null | PASS | admin | admin | | | | NULL |
| | customerlogin02 | The username is wrong and password is right, should return null | PASS | admin1 | password | | | | NULL |
| | customerlogin03 | The username is wrong and password is wrong, should return null | PASS | admin1 | admin1 | | | | NULL |
| | customerlogin04 | The username is right and password is right, should return the user | PASS | admin | password | | | | USER |
| | | | | | | | | | |
| **login** | | **Checks if if an owner can login** | | **Username** | **Password** | | | | |
| | ownerlogin01 | The username is right and password is wrong, should return null | PASS | Ownertest | password | | | | NULL |
| | ownerlogin02 | The username is wrong and password is right, should return null | PASS | Ownertest1 | 1234 | | | | NULL |
| | ownerlogin03 | The username is wrong and password is wrong, should return null | PASS | Ownertest1 | password | | | | NULL |
| | ownerlogin04 | The username is right and password is right, should return the user | PASS | Ownertest | 1234 | | | | OWNER |
| | | | | | | | | | |
| **register** | | **Checks if bad input will pass through validation checks** | | **Username** | **Password** | **Name** | **Address** | **Phone Number** | |
| | customerregister01 | All details are vaild but the username already exists in the database, returns null | PASS | Ownertest | password | Russell | 12 Melbourne | 03987656789 | NULL |
| | customerregister02 | All details are vaild, creates the user in the database | PASS | admin | password | Russell | 12 Melbourne | 03987656789 | USER |
| | customerregister03 | All details are valid but the name, returns null | PASS | admin | password | Russell1234 | 12 Melbourne | 03987656789 | NULL |
| | customerregister04 | All details are valid but the address, returns null | PASS | admin | password | Russell | Fake888*** | 03987656789 | NULL |
| | customerregister05 | All details are valid but the phone number, returns null | PASS | admin | password | Russell | 12 Melbourne | abcd | NULL |
| | | | | | | | | | |
| **addEmployee** | | **Checks if bad input will pass through validation checks** | | **Name** | **Phone Number** | **Address** | | | |
| | addemployeetest01 | All details are valid but the name, returns false | PASS | Fred1234 | 03123456789 | 12 Melbourne | | | FALSE |
| | addemployeetest02 | All details are valid but the phone number, returns false | PASS | Fred | asdf | 12 Melbourne | | | FALSE |
| | addemployeetest03 | All details are valid but the address, returns false | PASS | Fred | 03123456789 | Melbourne | | | FALSE |
| | addemployeetest04 | All details are vaild, creates the employee in the database, returns true | PASS | Fred | 03123456789 | 12 Melbourne | | | TRUE |
| | | | | | | | | | |
| **getEmployeeBookingAvailability** | | | | | | | | | |
| | getEmployeeBookingAvailability01 | Get employee booking availability for employee 0 after 0. | PASS | | | | | | |
| | getEmployeeBookingAvailability02 | Get employee booking availability for employee 3 after 0. | PASS | | | | | | |
| | getEmployeeBookingAvailability03 | Get employee booking availability for employee 3 after 2147410000. | PASS | | | | | | |
| | | | | | | | | | |
| **getWorkingTimes** | | | | | | | | | |
| | getWorkingTimes01 | get working times for employee 1 | PASS | | | | | | |
| | getWorkingTimes02 | get working times for employee 2 | PASS | | | | | | |
| | getWorkingTimes03 | get working times for employee 3 | PASS | | | | | | |
| | getWorkingTimes04 | get working times for non-existent employee '-1', should return null | PASS | | | | | | |
| | getWorkingTimes05 | get working times for non-existent employee '10', should return null | PASS | | | | | | |
| | | | | | | | | | |
| **addEmployee** | | | | | | | | | |
| | addEmployeeTest01 | Add employee with no owner | PASS | | | | | | |
| | addEmployeeTest02 | Add employee with invalid phone number | PASS | | | | | | |
| | addEmployeeTest03 | Add employee with no username | PASS | | | | | | |
| | addEmployeeTest04 | Add employee with invalid username | PASS | | | | | | |
| | addEmployeeTest05 | Add employee with no address | PASS | | | | | | |
| | addEmployeeTest06 | Add valid employee | PASS | | | | | | |
| | | | | | | | | | |
| **addWorkingTime** | | | | | | | | | |
| | addWorkingTime01 | Add a working time where the end time is before the start time | PASS | | | | | | |
| | addWorkingTime02 | Add a working time of duration 0 | PASS | | | | | | |
| | addWorkingTime03 | Add a working time with a negative start time | PASS | | | | | | |
| | addWorkingTime04 | Add a valid working time | PASS | | | | | | |
| | | | | | | | | | |
| **removeBooking** | | | | | | | | | |
| | removeBookings01 | Remove a non-existent booking | PASS | | | | | | |
| | removeBookings02 | Remove a booking without a business | PASS | | | | | | |
| | removeBookings03 | Remove a booking that does exist | PASS | | | | | | |
| | removeBookings04 | Remove a booking with an invalid id | PASS | | | | | | |
| | removeBookings05 | Remove a booking with an valid id | PASS | | | | | | |
| | | | | | | | | | |
| **addService** | | | | | | | | | |
| | addService01 | **Add service with an invalid name** | PASS | | | | | | |
| | addService02 | **Add a service that already exists** | PASS | | | | | | |
| | addService03 | Add a service with a negative duration | PASS | | | | | | |
| | addService04 | Add a service with a negative cost | PASS | | | | | | |
| | addService05 | Add a valid service | PASS | | | | | | |
| | addService06 | Add a service with a duration that isn't dividable by 30 | PASS | | | | | | |
| | | | | | | | | | |
| **addNewBooking** | | | | | | | | | |
| | addNewBooking01 | Add a valid booking | PASS | | | | | | |

| ***Function Name*** | ***Test ID*** | ***Description*** | ***Status*** | ***Test Data 1*** | ***Test Data 2*** | ***Test Data 3*** | ***Test Data 4*** | ***Test Data 5*** | ***Expected output*** |
|---|---|---|---|---|---|---|---|---|---|
|  | addNewBooking02 | **Add a booking that already exists** | PASS |  |  |  |  |  |  |
|  | addNewBooking03 | Add a booking that overlaps with another booking for the same employee | PASS |  |  |  |  |  |  |
|  | addNewBooking04 | Add a valid booking | PASS |  |  |  |  |  |  |
|  | addNewBooking05 | Add a booking for a non-existent user | PASS |  |  |  |  |  |  |
|  | addNewBooking06 | Add a booking where there is no slot available | PASS |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| **getEmployeeList** |  |  |  |  |  |  |  |  |  |
|  | getEmployeeList01 | Employee list returns the right employees | PASS |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| **getSummaryOfBookings** |  |  |  |  |  |  |  |  |  |
|  | getSummaryOfBookings01 | Correct bookings returned | PASS |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| **getCurrentBookings** |  |  |  |  |  |  |  |  |  |
|  | getCurrentBookings01 | Gets all bookings after system time | PASS |  |  |  |  |  |  |
|  | getCurrentBookings02 | Gets all bookings after system time after adding a new booking after system time | PASS |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| **getCustomerList** |  |  |  |  |  |  |  |  |  |
|  | getCustomerList01 | Returns correct customers | PASS |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| **getServicesList** |  |  |  |  |  |  |  |  |  |
|  | getServicesList01 | Returns correct services | PASS |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

| *Function Name* | *Test ID* | *Description* | *Status* | *Test Data 1* | *Test Data 2* | *Test Data 3* | *Test Data 4* | *Test Data 5* | *Expected output* |
|---|---|---|---|---|---|---|---|---|---|
| **searchUser** | | | | **Username** | | | | | |
| | searchUser1 | Check if the user does not exist in the database will return null | PASS | Ownertest123 | | | | | null |
| | searchUser2 | Check if Owner exists in the database and login | PASS | Ownertest | | | | | OWNER |
| | searchUser3 | Check if correct user is being returned | PASS | | | | | | |
| | searchUser4 | Check if correct user is being returned | PASS | | | | | | |
| | searchUser5 | Check that the user does not exist | PASS | | | | | | |
| | searchUser6 | Check that the user does not exist | PASS | | | | | | |
| **addEmployee** | | | | | | | | | |
| | addEmployee1 | employee added doesn't share timetable with another employee | PASS | | | | | | |
| | addEmployee2 | valid employee | PASS | | | | | | |
| | addEmployee3 | add employee with duplicate id | PASS | | | | | | |
| | addEmployee4 | add employee with a non existent business | PASS | | | | | | |
| | addEmployee5 | valid employee | PASS | | | | | | |
| **getAllServices** | | | | | | | | | |
| | getAllServices1 | check length of list | PASS | | | | | | |
| | getAllServices2 | check that all the services exist in the list | PASS | | | | | | |
| **addNewBooking** | | | | | | | | | |
| | addNewBooking1 | Add a valid booking | PASS | | | | | | |
| | addNewBooking2 | add a booking in the same slot as the last booking | PASS | | | | | | |
| | addNewBooking3 | Add a booking in an invalid slot | PASS | | | | | | |
| | addNewBooking4 | Add a booking right after another booking ends | PASS | | | | | | |
| | addNewBooking5 | Add a booking with a non-existent customer | PASS | | | | | | |
| | addNewBooking6 | Add a booking with a non-existent employee | PASS | | | | | | |
| | addNewBooking7 | Add a booking with a non-existent service | PASS | | | | | | |
| **getAvailableTimes** | | | | | | | | | |
| | getAvailableTimes1 | get available times for employee of id 0 | PASS | | | | | | |
| | getAvailableTimes2 | get available times for employee of id 1 | PASS | | | | | | |
| | getAvailableTimes3 | get available times for employee of id 2 | PASS | | | | | | |
| | getAvailableTimes4 | get available times for employee of id 3 | PASS | | | | | | |
| | getAvailableTimes5 | get available times for employee of id 4 | PASS | | | | | | |
| | getAvailableTimes6 | get available times for employee of id 5 | PASS | | | | | | |
| **addShift** | | | | | | | | | |
| | addShift1 | Add shift where end time is before the start time | PASS | | | | | | |
| | addShift2 | Add shift of duration 0, should not pass | PASS | | | | | | |
| | addShift3 | Add shift with a negative start time (Allows start time to go into previous day | PASS | | | | | | |
| | addShift4 | Add a valid shift | PASS | | | | | | |
| **removeBooking** | | | | | | | | | |
| | removeBooking1 | remove booking with negative id | PASS | | | | | | |
| | removeBooking2 | remove booking without specifying business | PASS | | | | | | |
| | removeBooking3 | remove booking with valid details | PASS | | | | | | |
| | removeBooking4 | remove booking with non existent id | PASS | | | | | | |
| | removeBooking5 | remove booking with id 0 | PASS | | | | | | |
| **getEmployeeBookingAvailability** | | | | | | | | | |
| | getEmployeeBookingAvailability1 | Get all booking availability slots which are available for employee 0 | PASS | | | | | | |
| | getEmployeeBookingAvailability2 | Get all booking availability slots which are available for employee 3 | PASS | | | | | | |
| | getEmployeeBookingAvailability3 | Get all bookings on or after 2147410000 for employee 3, which should be none | PASS | | | | | | |
| | getEmployeeBookingAvailability4 | Get all bookings on or after 1497522600 for employee 3, which should be 1 | PASS | | | | | | |
| | getEmployeeBookingAvailability5 | Only booking available after 1497522600 for employee 3 should start at 1497508200 | PASS | | | | | | |
| | getEmployeeBookingAvailability6 | Get all bookings on or after 1497522601 for employee 3, which should be none | PASS | | | | | | |
| **getShift** | | | | | | | | | |
| | getShift1 | get shifts of employee of id 0 | PASS | | | | | | |
| | getShift2 | get shifts of employee of id 1 | PASS | | | | | | |
| | getShift3 | get shifts of employee of id 2 | PASS | | | | | | |
| **getEmployeeList** | | | | | | | | | |
| | getEmployeeList1 | Check the length of the list | PASS | | | | | | |
| | getEmployeeList2 | Check that all employees exist in order | PASS | | | | | | |
| | getEmployeeList3 | Check that the list exists | PASS | | | | | | |
| **getAllCustomers** | | | | | | | | | |
| | getAllCustomers1 | Check the length of the list | PASS | | | | | | |

| ***Function Name*** | ***Test ID*** | ***Description*** | ***Status*** | ***Test Data 1*** | ***Test Data 2*** | ***Test Data 3*** | ***Test Data 4*** | ***Test Data 5*** | ***Expected output*** |
|---|---|---|---|---|---|---|---|---|---|
| | getAllCustomers2 | Check that all customers exist in order | PASS | | | | | | |
| | getAllCustomers3 | Check that the list exists | PASS | | | | | | |
| | | | | | | | | | |
| **getBookingsAfter** | | | | | | | | | |
| | getBookingsAfter1 | Get bookings after 0, there should be 8 | PASS | | | | | | |
| | getBookingsAfter2 | Get bookings after 1497506400, there should be 8 | PASS | | | | | | |
| | getBookingsAfter3 | Get bookings after 1497558600, there should be at least 1 | PASS | | | | | | |
| | getBookingsAfter4 | Get bookings after 1497558601, should return null | PASS | | | | | | |
| | getBookingsAfter5 | Get bookings after 1497558599, there should be at least 1 | PASS | | | | | | |
| | getBookingsAfter6 | Get bookings after 1497506401, there should be 7 | PASS | | | | | | |
| | | | | | | | | | |
| **getEmployeeAvailability** | | | | | | | | | |
| | getEmployeeAvailability1 | Make sure that available bookings match expected for employee 0 | PASS | | | | | | |
| | getEmployeeAvailability2 | Make sure that available bookings match expected for employee 1 | PASS | | | | | | |
| | getEmployeeAvailability3 | Make sure that available bookings match expected for employee 2 | PASS | | | | | | |
| | | | | | | | | | |
| **addCustomer** | | | | | | | | | |
| | addCustomer1 | Add valid customer | PASS | | | | | | |
| | addCustomer2 | Add customer with invalid username | PASS | | | | | | |
| | addCustomer3 | **Add customer with invlaid phone number** | PASS | | | | | | |
| | addCustomer4 | Add valid customer | PASS | | | | | | |
| | addCustomer5 | Add customer without a password | PASS | | | | | | |
| | addCustomer6 | **Add customer without a username** | PASS | | | | | | |
| | | | | | | | | | |
| **authenticate** | | | | | | | | | |
| | authenticate1 | Authenticate with correct details | PASS | | | | | | |
| | authenticate2 | Authenticate with correct details | PASS | | | | | | |
| | authenticate3 | Authenticate with correct details | PASS | | | | | | |
| | authenticate4 | Authenticate with incorrect username | PASS | | | | | | |
| | authenticate5 | Authenticate with incorrect password | PASS | | | | | | |
| | authenticate6 | Authenticate without any details | PASS | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

| *Function Name* | *Test ID* | *Description* | *Status* | *Test Data 1* | *Test Data 2* | *Test Data 3* | *Test Data 4* | *Test Data 5* | *Expected output* |
|---|---|---|---|---|---|---|---|---|---|
| **convertSecondsToDay()** | | **Checks the conversion of seconds to days** | | **Seconds** | | | | | |
| | testConvertSecondsToDay1 | Checks if it converts to tuesda | PASS | 86401 | | | | | TRUE |
| | testConvertSecondsToDay2 | Checks if it converts to monda | PASS | 86399 | | | | | TRUE |
| | testConvertSecondsToDay3 | Checks if it converts to friday | PASS | 345600 | | | | | TRUE |
| | testConvertSecondsToDay4 | Checks if it converts to tuesda | PASS | 90000 | | | | | TRUE |
| | testConvertSecondsToDay5 | Checks if it converts to tuesda | PASS | 100000 | | | | | TRUE |
| | testConvertSecondsToDay6 | Checks if it converts to Sunday | PASS | 604799 | | | | | TRUE |
| | testConvertSecondsToDay7 | Checks if it converts to Monda | PASS | 1 | | | | | TRUE |
| | | | | | | | | | |
| | | | | | | | | | |
| **convertDayToSeconds()** | | | | **Day String** | | | | | |
| | testConvertDayToSeconds1 | Checks if it converts to 0 | PASS | Monday | | | | | TRUE |
| | testConvertDayToSeconds2 | Checks if it converts to 86400 | PASS | Tuesday | | | | | TRUE |
| | testConvertDayToSeconds3 | Checks if it converts to 172800 | PASS | Wednesday | | | | | TRUE |
| | testConvertDayToSeconds4 | Checks if it converts to 259200 | PASS | Thursday | | | | | TRUE |
| | testConvertDayToSeconds5 | Checks if it converts to 345600 | PASS | Friday | | | | | TRUE |
| | testConvertDayToSeconds6 | Checks if it converts to 518400 | PASS | Sunday | | | | | TRUE |
| | testConvertDayToSeconds7 | Checks if it converts to 0 | PASS | Not a valid day | | | | | TRUE |
| | | | | | | | | | |
| **checkIsValidWeekday()** | | | | | | | | | |
| | checkValidDay1 | Checks if "Monday" is a valid c | PASS | | | | | | TRUE |
| | checkValidDay2 | Checks if "Sunday" is a valid d | PASS | | | | | | TRUE |
| | checkValidDay3 | Checks if "WEDNESDAY" is a | PASS | | | | | | TRUE |
| | checkValidDay4 | Checks if "friday" is a valid dat | PASS | | | | | | TRUE |
| | checkValidDay5 | Checks if "MON" is a valid date | PASS | | | | | | FALSE |
| | checkValidDay6 | Checks if "Saturnday" is a vali | PASS | | | | | | FALSE |
| | | | | | | | | | |
| **get24HrTimeFromWeekTime()** | | | | | | | | | |
| | testConvertTimeTo24hrTime1 | Check if 60 seconds is equal t | PASS | | | | | | TRUE |
| | testConvertTimeTo24hrTime2 | Check if 3600 seconds is equa | PASS | | | | | | TRUE |
| | testConvertTimeTo24hrTime3 | Check if 86399 seconds is equ | PASS | | | | | | TRUE |
| | testConvertTimeTo24hrTime4 | Check if 86340 seconds is equ | PASS | | | | | | TRUE |
| | | | | | | | | | |

| *Function Name* | *Test ID* | *Description* | *Status* | *Test Data 1* | *Test Data 2* | *Test Data 3* | *Test Data 4* | *Test Data 5* | *Expected output* |
|---|---|---|---|---|---|---|---|---|---|
| **mergeTimetable()** | | **Checks to see if it merges 2 timetables together** | | **Timetable 1** | **Timetable 2** | | | | |
| | mergeTimetable1 | Checks the merging of and empty timetable and filled timetable | PASS | *Empty* | 90000,93600\|97200,100600\|21600,43200 | | | | TRUE |
| | mergeTimetable2 | Checks the merging of 2 tables with contradicting times | PASS | 93500,97300 | 90000,93600\|97200,100600\|21600,43200 | | | | TRUE |
| | mergeTimetable3 | Checks the merging of 2 tables with contradicting times | PASS | 90000,93600\|972 | 93500,97300\|21600,43200 | | | | TRUE |
| | mergeTimetable4 | Checks the merging of 2 tables with different times | PASS | 21600,43200 | 90000,93600\|97200,100600 | | | | TRUE |
| | mergeTimetable5 | Checks the merging of 2 tables with different times, only one period each | PASS | 90000,93600 | 21600,43200 | | | | TRUE |
| | mergeTimetable6 | Checks the merging of 2 tables with different times, only one period each | PASS | 40000,43600 | 91600,123200 | | | | TRUE |
| | | | | | | | | | |
| **addPeriod()** | | **Adds periods to a timetable** | | **Period 1** | **Period 2** | | | | |
| | addPeriod1 | Checks to see if the new period is added to an empty timetable | PASS | 90000,93600 | | | | | TRUE |
| | addPeriod2 | Checks to see if the new period is added to an empty timetable | PASS | 40000,43600 | | | | | TRUE |
| | addPeriod3 | Checks to see if the new period is added to a timetable with a period in it | PASS | 90000,93600 | 40000,43600 | | | | TRUE |
| | addPeriod4 | Checks to see if the new period is added to a timetable with a period in it | PASS | 40000,43600 | 90000,93600 | | | | TRUE |
| | | | | | | | | | |
| **addPeriod()** | | **Removes periods to a timetable** | | **Period 1** | **Period 2** | **Time Table** | | | |
| | removePeriod1 | Checks to see if the period is romoved from the timetable | PASS | 90000,93600 | | 90000,93600\|40000,43600 | | | TRUE |
| | removePeriod2 | Checks to see if the period is romoved from the timetable | PASS | 40000,43600 | | 90000,93600\|40000,43600 | | | TRUE |
| | removePeriod3 | Checks to see if the all periods are romoved from the timetable | PASS | 90000,93600 | 40000,43600 | 90000,93600\|40000,43600 | | | TRUE |
| | removePeriod4 | Checks to see if it returns false if trying to remove a period that is not there | PASS | 40000,43600 | 90000,93600 | | | | TRUE |
| | | | | | | | | | |
| **toStringArray()** | | **Checks the output of the function to ensure its in the right format** | | **Timetable** | | | | | |
| | toStringArray | Runs the methods and iterates through the elemets of the array checking each of them | PASS | 90000,93600\|97200,100600\|21600,43200 | | | | | TRUE |
| | | | | | | | | | |