**Functional Black Box Testing**

| **Name of file** | **Input** | **Expected Output** | **Actual Output** | **Reasoning** |
| --- | --- | --- | --- | --- |
| “normalNoProblems.txt” | Go to the Gym-830-1130-2 hrs  Eat Lunch-1200-1300-30 mins  Homework-1200-1930-2 hrs  Eat Breakfast-830-850-20 mins  Ponder Life-830-1630-2 hrs  Kickboxing-1200-1500-2 hrs | Eat Breakfast: 8:30am - 8:50am  Go to the Gym: 8:50am - 10:50am  Eat Lunch: 12:00pm - 12:30pm  Kickboxing: 12:30pm - 2:30pm  Ponder Life: 2:30pm - 4:30pm  Homework: 4:30pm - 6:30pm | Match  Expected | Testing if a normal case with no errors and relatively non-complex schedule works |
| “normalWithProblems.txt” | Go to the Gym-830-1130-2 hrs  Eat Lunch-1200-1300-30 mins  Homework-1200-1630-2 hrs  Eat Breakfast-830-850-30 mins  Ponder Life-830-1630-2 hrs  Kickboxing-1200-1300-2 hrs | Eat Breakfast is not allowed to be scheduled.  Kickboxing is not allowed to be scheduled.  Schedule is possible. Here is the result:  Go to the Gym: 8:30am - 10:30am  Eat Lunch: 12:00pm - 12:30pm  Homework: 12:30pm - 2:30pm  Ponder Life: 2:30pm - 4:30pm | Match Expected | Testing error handling to see if activities outside absolute min and max are considered invalid |
| “testLowMax.txt” | Go to the Gym-800-1130-2 hrs  Eat Lunch-800-1300-30 mins  Homework-800-1630-2 hrs  Eat Breakfast-800-930-30 mins  Ponder Life-800-1630-2 hrs  Kickboxing-800-1500-2 hrs | No schedule possible | Match Expected | Tests to see if all activities are below lower boundary and therefore not included and no schedule possible |
| “bigTimeRange.txt” | Go to the Gym-830-2200-2 hrs  Eat Lunch-1200-1400-1 hrs  Finish Work-1300-2000-2 hrs  Make Dinner-1700-2000-90 mins  Stuff-2100-2330-1 hrs | Schedule is possible. Here is the result:  Go to the Gym: 8:30am - 10:30am  Eat Lunch: 12:00pm - 1:00pm  Finish Work: 1:00pm - 3:00pm  Make Dinner: 5:00pm - 6:30pm  Stuff: 9:00pm - 10:00pm | Match expected | testing input that has large time ranges in order to evaluate if that ruins schedule ordering |
| “invalid.txt” | “invalid.txt” | error message for text file | Match Expected  got back error message so working correctly | testing a invalid text file to see that it responds with proper mssg |
| “constant.txt” | Breakfast-830-930-47 mins  Eat Lunch-915-930-8 mins  Homework-1030-1230-1 hrs  Gym-1030-1230-25 mins  Ponder Life-1930-2130-30 mins | Expected No Match | Matched Expected | Exposed problem regarding how time constant effects algorithm |
| “constant2.txt” | Breakfast-830-930-47 mins  Eat Lunch-915-930-8 mins  Homework-1030-1230-1 hrs  Gym-1030-1230-25 mins  Ponder Life-1930-2130-30 mins | Expected Match  (same case as above but with reduced time constant) | Matched Expected | Shows how the time variable will change the correctness of our solution |

PROLOG, HASKELL:

| **Name of file** | **Input** | **Expected Output** | **Actual Output** | **Reasoning** |
| --- | --- | --- | --- | --- |
| “normalNoProblems.txt” | Go to the Gym-830-1130-120 mins  Eat Lunch-1200-1300-30 mins  Homework-1200-1930-120 mins  Eat Breakfast-830-850-20 mins  Ponder Life-830-1630-120 mins  Kickboxing-1200-1500-120 mins | Name: Eat Breakfast, ActualStart: 830, ActualEnd: 850  Name: Go to the Gym, ActualStart: 830, ActualEnd: 1030  Name: Eat Lunch, ActualStart: 1200, ActualEnd: 1230  Name: Homework, ActualStart: 1200, ActualEnd: 1400 | Match Expected | Testing if a normal case with no errors and a relatively non-complex schedule works |
| “normalWithProblems.txt” | Go to the Gym-830-1130-120 mins  Eat Lunch-1200-1300-30 mins  Homework-1200-1630-120 mins  Eat Breakfast-830-850-30 mins  Ponder Life-830-1630-120 mins  Kickboxing-1200-1300-120 mins | Name: Eat Breakfast, ActualStart: 830, ActualEnd: 900  Name: Go to the Gym, ActualStart: 830, ActualEnd: 1030  Name: Eat Lunch, ActualStart: 1200, ActualEnd: 1230  Name: Homework, ActualStart: 1200, ActualEnd: 1400 | Match Expected with Prolog, not with Haskell | Testing error handling to see if activities outside absolute min and max are considered invalid |
| “testLowMax.txt” | Go to the Gym-800-1130-2 hrs  Eat Lunch-800-1300-30 mins  Homework-800-1630-2 hrs  Eat Breakfast-800-930-30 mins  Ponder Life-800-1630-2 hrs  Kickboxing-800-1500-2 hrs | No schedule possible | Match Expected | Tests to see if all activities are below lower boundary and therefore not included and no schedule possible |
| “bigTimeRange.txt” | Go to the Gym-830-2200-120 mins  Eat Lunch-1200-1400-120 mins  Finish Work-1300-2000-120 mins  Make Dinner-1700-2000-90 mins  Stuff-2100-2330-60 mins | Name: Go to the Gym, ActualStart: 830, ActualEnd: 1030  Name: Eat Lunch, ActualStart: 1200, ActualEnd: 1300  Name: Finish Work, ActualStart: 1300, ActualEnd: 1500  Name: Make Dinner, ActualStart: 1700, ActualEnd: 1830  Name: Stuff, ActualStart: 2100, ActualEnd: 2200 | Match expected | testing input that has large time ranges in order to evaluate if that ruins schedule ordering |
| file does not exist | “invalid.txt” | error message for text file | Match Expected  got back error message | testing an invalid text file to see that it responds with proper mssg |
|  | Breakfast-830-930-47 mins  Eat Lunch-915-930-8 mins  Homework-1030-1230-60 mins  Gym-1030-1230-25 mins  Ponder Life-1930-2130-30 mins | Expected No Match  with higher time constant | Matched Expected | Testing to see if working |
|  | Breakfast-830-930-47 mins  Eat Lunch-915-930-8 mins  Homework-1030-1230-60 mins  Gym-1030-1230-25 mins  Ponder Life-1930-2130-30 mins | Expected Match  (same case as above but with reduced time constant) | Matched Expected | Testing to see if working |