

CSE 341 Programming Languages Homework-4 Report

In the first part of the assignment, 3 objects and 5 cargo officers were defined as desired. One of these objects is being carried by a courier and the rest of the objects are idle. My solution method is to find personnel who can carry the desired object and calculate the time it takes for the personnel to pick up the cargo and go to the desired location and then throw it into a list. Then I give the smallest element in the list as output during the query. Some input examples :

```
?- consult('part1.pl').
```

```
true
```

```
?- get_available_personnel(cargo1, Personnel, Time).
```

```
Personnel = courier2,
```

```
Time = 8 ;
```

```
Personnel = courier3,
```

```
Time = 16.
```

```
?- get_available_personnel(cargo5, Personnel, Time).
```

```
"dp1" personell already transporting "cargo5".
```

```
false.
```

In the second part, I print a decision tree from the Iris dataset to a txt file with a Python code. Then I wrote a Prolog code according to this decision tree. In this code, it takes 4 inputs in a similar way and prints the type name of the flower type that matches the given values. In order not to create a conflict, I added the Python code I wrote and the txt file named decision tree with the output to the assignment. Here are sample inputs :

```
?- consult('part2.pl').
```

```
true
```

```
?- classify(4.9, 2.5, 3.5, 3.5, 1.4).
```

```
Iris-versicolor
```

```
true .
```

```
?- classify(4.9, 2.5, 2.5, 1.5, 0.4).
```

```
Iris-setosa
```

```
true .
```

```
?- classify(6.9, 3.5, 4.5, 4.5, 1.4).
```

```
Iris-versicolor
```

```
true .
```

```
?- classify(5.9, 3.5, 4.5, 4.5, 9.4).
```

```
false
```