

CSE 341 – PROGRAMMING LANGUAGES

Assignment - 4

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```
Activities Terminal Jan 7 23:35 hamza@ubuntu: ~/Desktop/PL/hw4
[ERROR: check/0
ERROR: (DWM could not correct goal)
?- [part1].
true.

?- check(package1).
Delivery Person: person1
Capacity: capacity(50)
Work Hours: 9 to 17
Current Location: location(library)
JOBS
Delivery Person: person2
Capacity: capacity(42)
Work Hours: 8 to 16
Current Location: location(library)
JOBS
true.

?- check(package2).
Delivery Person: person1
Capacity: capacity(50)
Work Hours: 9 to 17
Current Location: location(library)
JOBS
Delivery Person: person2
Capacity: capacity(42)
Work Hours: 8 to 16
Current Location: location(library)
JOBS
true.

?- check(package3).
Delivery Person: person3
Capacity: capacity(35)
Work Hours: 6 to 22
Current Location: location(cafeateria)
JOBS
true.

?- []
```

There are 5 packages in the system. I have checked situation 3 of them for testing. Available delivery persons are displayed th console.

```
Activities Terminal Jan 7 23:44 hamza@ubuntu: ~/Desktop/PL/hw4
Delivery Person: person2
Capacity: capacity(42)
Work Hours: 8 to 16
Current Location: location(library)
JOBS
true.

?- check(package3).
Delivery Person: person3
Capacity: capacity(35)
Work Hours: 6 to 22
Current Location: location(cafeateria)
JOBS
true.

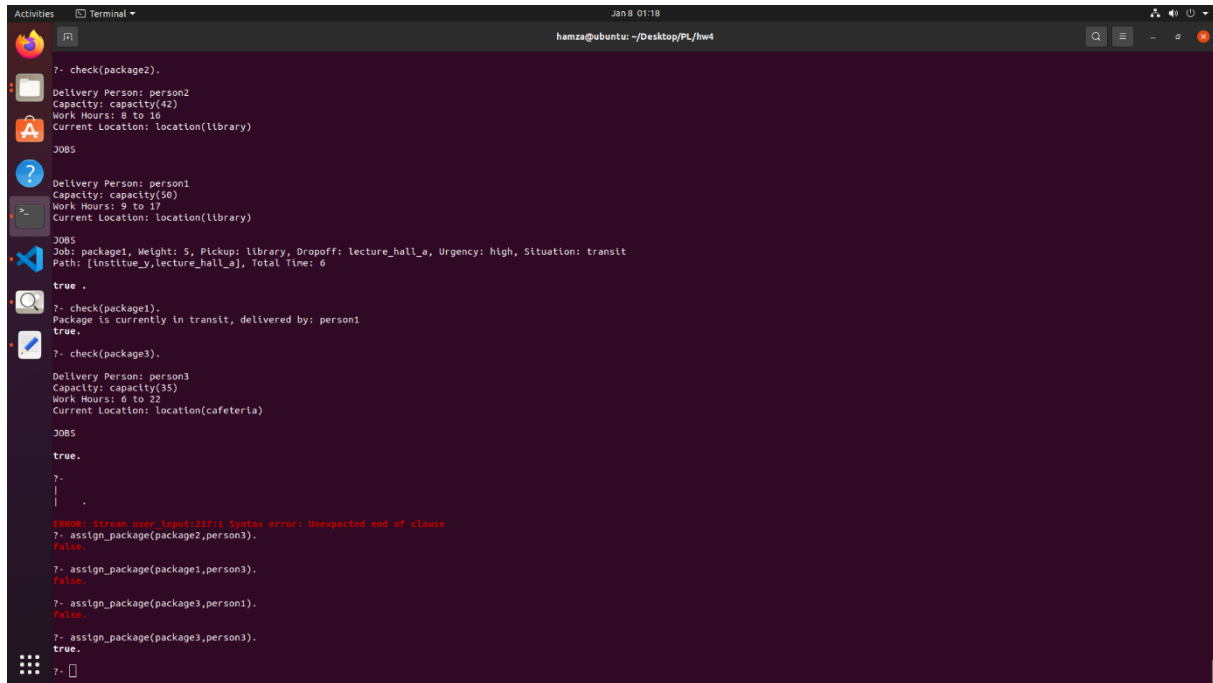
?- assign_package(package1).
[ERROR: undefined procedure: assign_package/1
ERROR: However, there are definitions for:
ERROR: assign_package/2
false.

?- assign_package(package1,person1).
true.

?- check(package1).
Package is currently in transit, delivered by: person1
true.

?- check(package2).
Delivery Person: person2
Capacity: capacity(42)
Work Hours: 8 to 16
Current Location: location(library)
JOBS
Delivery Person: person1
Capacity: capacity(50)
Work Hours: 9 to 17
Current Location: location(library)
JOBS
Job: package1, Weight: 5, Pickup: library, Dropoff: lecture_hall_a, Urgency: high, Situation: transit
Path: [Institute_y,lecture_hall_a], Total Time: 6
true []
```

If we assign package1 to person1 situation of the package1 will convert to transit and it can not assign another delivery person anymore. after assigned, package will be assigned to person1 and package will be assigned as job to delivery person. Details are at the above image.

A terminal window titled 'Terminal' with the user 'hamza@ubuntu' and path '~/Desktop/PL/hw4'. The terminal shows a series of commands and their outputs. It starts with 'check(package2)' which returns details for 'person2' (capacity 42, work hours 8-16, location library) and 'JOBS'. Then 'check(package1)' returns details for 'person1' (capacity 50, work hours 9-17, location library) and 'JOBS'. A job is assigned to person1: 'Job: package1, Weight: 5, Pickup: library, Dropoff: lecture_hall_a, Urgency: high, Situation: transit, Path: [institute_y, lecture_hall_a], Total Time: 6'. This is followed by 'true.' and another 'check(package1)' which returns 'Package is currently in transit, delivered by: person1' and 'true.'. Then 'check(package3)' returns details for 'person3' (capacity 35, work hours 6-22, location cafeteria) and 'JOBS', followed by 'true.'. There is a blank line and a period. Then an error message appears: 'ERROR: Stream user_input:217:1 Syntax error: Unexpected end of clause'. This is followed by 'assign_package(package2,person3)' returning 'false.', 'assign_package(package1,person3)' returning 'false.', 'assign_package(package3,person1)' returning 'false.', and 'assign_package(package3,person3)' returning 'true.'. The prompt '?:' is visible at the bottom.

```
?: check(package2).
Delivery Person: person2
Capacity: capacity(42)
Work Hours: 8 to 16
Current Location: location(library)
JOBS
Delivery Person: person1
Capacity: capacity(50)
Work Hours: 9 to 17
Current Location: location(library)
JOBS
Job: package1, Weight: 5, Pickup: library, Dropoff: lecture_hall_a, Urgency: high, Situation: transit
Path: [institute_y, lecture_hall_a], Total Time: 6
true.
?: check(package1).
Package is currently in transit, delivered by: person1
true.
?: check(package3).
Delivery Person: person3
Capacity: capacity(35)
Work Hours: 6 to 22
Current Location: location(cafeteria)
JOBS
true.
?:
|
.
ERROR: Stream user_input:217:1 Syntax error: Unexpected end of clause
?: assign_package(package2,person3).
false.
?: assign_package(package1,person3).
false.
?: assign_package(package3,person1).
false.
?: assign_package(package3,person3).
true.
?:
```

Package2 situation is none it can assigned to person2 only. If we try to assign it another person returned false.

Package1 situation is transit. Because of that we can not assign it another user

```
Activities Terminal Jan 8 01:21 hamza@ubuntu: ~/Desktop/PL/hw4

?- assign_package(package2,person3).
false.
?- assign_package(package2,person3).
false.
?- assign_package(package3,person1).
false.
?- assign_package(package3,person3).
true.
?- print_package_info(X).
Package: package2
Weight: weight(6)
Delivery ID: deliver_id(none)
Pickup Location: library
Dropoff Location: engineering_bld
Urgency: urgency(low)
Situation: situation(none)
X = package2 ;
Package: package4
Weight: weight(3)
Delivery ID: deliver_id(none)
Pickup Location: social_science_bld
Dropoff Location: lecture_hall_a
Urgency: urgency(high)
Situation: situation(none)
X = package4 ;
Package: package5
Weight: weight(8)
Delivery ID: deliver_id(none)
Pickup Location: institute_x
Dropoff Location: admin_office
Urgency: urgency(high)
Situation: situation(none)
X = package5 ;
Package: package1
Weight: weight(5)
Delivery ID: deliver_id(person1)
Pickup Location: library
Dropoff Location: lecture_hall_a
Urgency: urgency(high)
Situation: situation(transit)
X = package1 ;
Package: package3
Weight: weight(4)
Delivery ID: deliver_id(person3)
Pickup Location: cafeteria
Dropoff Location: institute_y
Urgency: urgency(medium)
Situation: situation(transit)
X = package3.
?- 
```

informations of the packages are above

```
Activities Terminal Jan 8 01:24 hamza@ubuntu: ~/Desktop/PL/hw4

Dropoff Location: institute_y
Urgency: urgency(medium)
Situation: situation(transit)
X = package3.
?- [part1].
true.
?- assign_package(package2,person2).
true.
?- assign_package(package1,person2).
true.
?- assign_package(package3,person3).
true.
?- print_delivery_person_info(X).
Delivery Person: person1
Capacity: capacity(50)
Work Hours: 9 to 17
Current Location: location(library)
JOBS
X = person1 ;
Delivery Person: person2
Capacity: capacity(42)
Work Hours: 8 to 16
Current Location: location(library)
JOBS
Job: package1, Weight: 5, Pickup: library, Dropoff: lecture_hall_a, Urgency: high, Situation: transit
Path: [institute_y,lecture_hall_a], Total Time: 6
Job: package2, Weight: 6, Pickup: library, Dropoff: engineering_bld, Urgency: low, Situation: transit
Path: [engineering_bld], Total Time: 5
X = person2 ;
Delivery Person: person3
Capacity: capacity(35)
Work Hours: 6 to 22
Current Location: location(cafeteria)
JOBS
Job: package3, Weight: 4, Pickup: cafeteria, Dropoff: institute_y, Urgency: medium, Situation: transit
Path: [library,institute_y], Total Time: 8
X = person3 ;
Path: [social_science_bld,library,institute_y], Total Time: 7
X = person3 ;
false.
?- 
```

Informations of the deliver people are above.