

The George Washington University



Advanced Software Paradigms (CSCI 6221.10)

Homework Assignment #7

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Submitted to:

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Steps for execution:

1. The provided program is written in **Prolog**. To run it, use any online Prolog compiler, for example, https://www.tutorialspoint.com/execute_prolog_online.php. This is the compiler used for testing the program.
2. Copy the code from the attached source code .txt file and paste it into the code area in the online compiler.
3. Click the “Execute” button in the top left part of the compiler website.
4. Review the output/result displayed by the compiler, as illustrated in Figure 1.

Screenshots:

1. Loading student scores

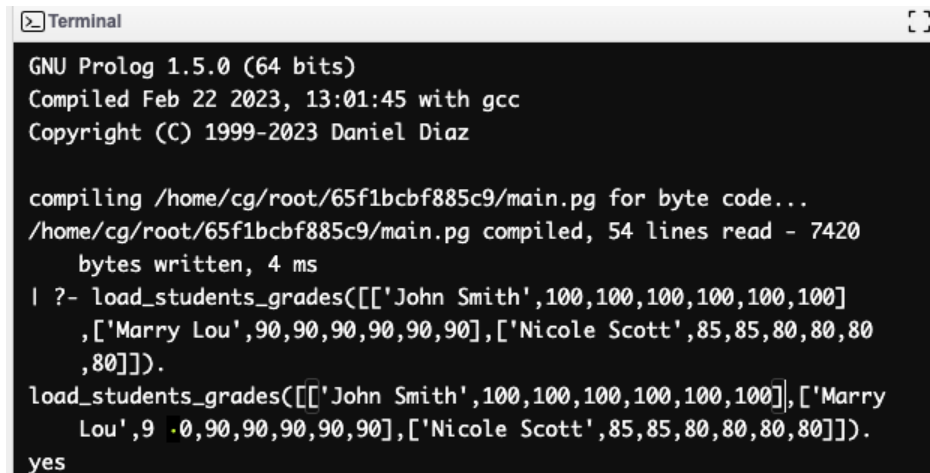
A terminal window titled "Terminal" with a dark background and light text. It shows the output of GNU Prolog 1.5.0 (64 bits), compiled on Feb 22 2023. The program is compiling a file named main.pg. After compilation, a query is entered: ?- load_students_grades([['John Smith',100,100,100,100,100,100],['Marry Lou',90,90,90,90,90,90],['Nicole Scott',85,85,80,80,80,80]]). The output is 'yes'.

Figure 1: Result of the program when asked to load student scores

2. Displaying all students with a specific letter grade

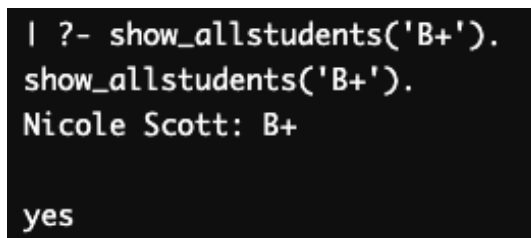
A terminal window showing the execution of a Prolog query. The query is: ?- show_allstudents('B+'). The output is: show_allstudents('B+'). Nicole Scott: B+ yes.

Figure 2: Result of the program when asked for students with a specific letter grade

```
| ?- show_allstudents('A').  
show_allstudents('A').  
John Smith: A  
Marry Lou: A  
yes
```

Figure 3: Result of the program when asked for students with a specific letter grade

3. Displaying the letter grade of a specific student using their name.

```
| ?- show_student_grade('Nicole Scott').  
show_student_grade('Nicole Scott').  
Nicole Scott: B+  
true ?  
yes
```

Figure 4: Result of the program when asked for the letter grade of a specific student using their name

4. Displaying the letter grade of a specific student using their name (when the student's name is not present in the records)

```
| ?- show_student_grade('Niscole Scott').  
show_student_grade('Niscole Scott').  
no
```

Figure 5: Result of the program when asked for the letter grade of a specific student using their name (when there is no student present in records)