CMPE 108 Programming Fundamentals

Laboratory Work 4: Introduction to Selection structures
To be done in groups of two.

OBJECTIVES
- Evaluation and use of IF statements.
- Evaluation and use of SWITCH statements.

1. Write a C program that uses an if else statement to compute and print the circumference or the area of a square using the formulas:
   circumference = 4* side and area = side * side.

   The program should read the user's desire into a variable user_request, and the side of the square into the variable side. If user_request is 1, the program find and print the circumference. If user_request is something else, the program should find the area and print it.

2. Write a program for the following problem. An instructor needs a program that accepts three exam grades, exam1, exam2 and final_exam for a course, as input and then determines and outputs for the student the semester average and the final letter grade of the course according to the following table:

<table>
<thead>
<tr>
<th>Semester Average</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-100</td>
<td>A</td>
</tr>
<tr>
<td>80-89</td>
<td>B</td>
</tr>
<tr>
<td>70-79</td>
<td>C</td>
</tr>
<tr>
<td>60-69</td>
<td>D</td>
</tr>
<tr>
<td>0-59</td>
<td>F</td>
</tr>
</tbody>
</table>

   The semester average for the student is computed using the following formula:
   semester_average = 0.20 * exam1 + 0.30 * exam2 + 0.50 * final_exam
A session of the program should have the following appearance:

Enter exam grade 1: 70
Enter exam grade 2: 80
Enter final exam grade: 100
Semester average for student 1100: 88
Letter grade for student 1100 : B