Assignment Questions

***After Class:***

1. Accept 3 inputs from the user: op1, op2,op3. If op3 is 1 the add op1 and op2 and display the result. If op3 is 2 display the difference, if op3 Is 3 display the product, if op3 is 4 display the quotient as a floating point value. Use If-else ladder to solve the problem.
2. In a car racing video game, the car is an object. You can drive the car, turn the car, or stop the car when needed but you need to drive long. You will get money according to the Km you have travelled. For example if you have travelled 123 km then the product of the km (ie 1\*2\*3 = 6) would be the amount you win. Write a program to find the product of the digits in the given input number.
3. Write an algorithm to accept a number and return the reverse of the same. If the number ends with one or more zeros, then in the reversed number those zeros will not be present (since those zeros become leading zeros).
4. Abay and Babita are playing chess. They play three rounds. Abay’s scores are stored in variables a1, a2, a3. Babita’s scores are stored in variables b1,b2,b3. The total in computed by comparing the individual rounds.

If a1 > b1 then Abay gets 1 point.

If a1 = b1 then nobody gets any point.

If a1 < b1 then Babita gets 1 point.

You have to find the points in each round and sum it to up to get the final score and declare the winner.

1. Convert a given decimal number into binary. For Example if a number 5 is the input, the output should be 101.

Hint: divide the number by 2 reconstruct the remainder

1. Convert a given binary number into decimal. For example if a given number is 101, then he output should be 5.

Hint: Divide the number and digits and multiply by power of 2.

1. Write a program to generate n Fibonacci series

Fibonacci series is : 0,1,1,2,3,5…..

1. Display the grade of N students in an examination based on their average score. Average score has to be accepted from the user. The grades are computed as per the table below:

|  |  |
| --- | --- |
| Score | Grade |
| 80 to 100 | A |
| 50 to 79 | B |
| 35 to 49 | C |
| Less than 35 | Fail |

1. Generate the following pattern:

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\* \*

\* \* \*

\* \* \* \*

\* \* \* \* \*

1. Accept a string from the user. Encode it as follows:

A – 2

E – 4

I – 6

O – 8

U – 10

After encoding, display the later half of the string in capital letter.

E.g Input string: “manipal prolearn”

Encoded string: “m2n6p2l pr8l42rn”

Later half(index [8:]) : “PR8L42RN”

1. Accept a string and a pattern. Display the number of times a pattern occurs.

E.g String: “Mango is a fruit. Orange is a color”

Pattern: “is”

Output: 2