

## Assignment # 2

### Selective Structures (Using if, if else, switch)

1. WAP to read 3 numbers and find the middle number.
2. WAP to read an alphabet and convert it into Uppercase if it is lowercase and vice versa.
3. WAP to read a year and check whether it is leap year or not. (Note: A year is leap year if it is divisible only by 4 or by 4,100 and 400)
4. WAP to find all possible roots of a quadratic equation  $ax^2 + bx + c = 0$ .
5. WAP to calculate the area of a triangle given the length of its sides. But for three sides to form a triangle, the sum of two sides must be greater than the third.

(hints:  $s = a+b+c/2$  area =  $\sqrt{s(s-a)(s-b)(s-c)}$  , where a,b,c are length of 3 sides.

6. WAP to read a 3 digit number and check whether it is Armstrong number or not. (For example,  $153 = (1*1*1) + (2*2*2) + (3*3*3)$  is a Armstrong number.)
7. WAP to read two numbers and an arithmetic operator and perform the corresponding arithmetic operation on those numbers. (Using both else if and switch ).
8. WAP to read percentage scored by a student and print the corresponding division. (Using both else if and switch ).

| <u>Percent</u> | <u>Division</u> |
|----------------|-----------------|
| >80            | Distinction     |
| 60-79          | First Division  |
| 50-59          | Second Division |
| 40-49          | Third Division  |
| <40            | Fail            |

8. WAP to calculate electricity bill for domestic consumers.

| <u>Units</u> | <u>Charge/Unit</u> |
|--------------|--------------------|
| 0-20         | 3.00               |
| 21-30        | 7.00               |
| 31-50        | 8.50               |
| 51-150       | 10.00              |
| 151 – 250    | 11.00              |
| 215 – 400    | 12.00              |
| Above 400    | 13.00              |