C assignments – Day 11 (7-Sept-2022)

Name – Shreyas Raju Awankar

Que1- Write a program to find the greatest of 6 numbers.

```c
#include <stdio.h>
void main()
{
    float a, b, c, d, e, f;
    printf("Enter six numbers \n");
    scanf("%f%f%f%f%f%f", &a, &b, &c, &d, &e, &f);

    if (a > b && a > c && a > d && a > e && a > f)
    {
        printf("a is greater");
    }
    else if (b > c && b > d && b > e && b > f)
    {
        printf("b is greater");
    }
    else if (c > d && c > e && c > f)
    {
        printf("c is greater");
    }
    else if (d > e && c > f)
    {
        printf("d is greater");
    }
    else if (e > f)
    {
        printf("e is greater");
    }
    else
    {
        printf("f is greater");
    }
}
```

Que2- Write a program to find the smallest of 10 numbers.

```c
#include <stdio.h>
void main()
{
    int a, b, c, d, e, f, g, h, i, j;
    printf("Enter 10 numbers\n");
    scanf("%d%d%d%d%d%d%d%d%d%d",&a, &b, &c, &d, &e, &f, &g, &h, &i, &j);

    if (a < b && a < c && a < d && a < e && a < f && a < g && a < h && a < i && a
< j)
        printf("a is the smallest");
    else if (b < c && b < d && b < e && b < f && b < g && b < h && b < i && b <
j)
        printf("b is the smallest");
    else if (c < d && c < e && c < f && c < g && c < h && c < i && c < j)
        printf("c is the smallest");
    else if (d < e && d < f && d < g && d < h && d < i && d < j)
        printf("d is the smallest");
    else if (e < f && e < g && e < h && e < i && e < j)
        printf("e is the smallest");
    else if (f < g && f < h && f < i && f < j)
        printf("f is the smallest");
    else if (g < h && g < i && g < j)
        printf("g is the smallest");
    else if (h < i && h < j)
        printf("h is the smallest");
    else
        printf("f is the smallest");
}
```

Que3- Write a program to check if a number is positive negative.

```c
#include <stdio.h>
void main(){
    int a;
    printf("Enter a number \n");
    scanf("%d",&a);
    if(a%10>=0)
    printf("The entered number is positive.");
    else
    printf("The entered number is negative.");
}
```

Que4- Write a program to read a choice from user and read two numbers from the user.

If choice is 10, add the numbers.

If choice is 20, multiply the numbers.

If choice is 30, display the sum of squares of these two numbers.

If choice is 40, display the sum of square of every digit of both the numbers.

If choice is 50, display the difference between the last digits of the two numbers.

If choice is 60, display the sum of cube of all the digits of both the numbers.

If choice is other than all the choices the display the "wrong choice"

```c
#include <stdio.h>
void main()
{
    int a, b, choice;
    printf("Enter two 2-digit numbers\n"); // The digits are fixed so as to
tackle choice 40 & 60 without loop...
    scanf("%d%d", &a, &b);
    printf("Enter your choice\n");
    scanf("%d", &choice);

    if (choice == 10)
        printf("The addition of entered numbers is: %d", a + b);
    else if (choice == 20)
        printf("The multiplication of entered numbers is: %d", a * b);
    else if (choice == 30)
        printf("The sum of square of entered numbers is: %d", a * a + b * b);
    else if (choice == 40)
    {
        int x, y, p, q;
        x = a % 10;
        x *= x;
        y = a / 10;
        y *= y;
        p = a % 10;
        p *= p;
        q = a / 10;
        q *= q;
        printf("The sum of square of every digit of the numbers entered is: %d",
p + q + x + y);
    }
    else if (choice == 50)
```

```c
        printf("The substraction of last digits of the numbers entered is: %d", a
% 10 - b % 10);
    else if (choice == 60)
    {
        int x, y, p, q;
        x = a / 10;
        x *= x * x;
        // printf("%d\n", x);

        y = a % 10;
        if (y <= 0)
        {
            y *= -1;
        }
        y *= y * y;
        // printf("%d\n", y);

        p = b / 10;
        p *= p * p;
        printf("%d\n", p);

        q = b % 10;
        if (q <= 0)
        {
            q *= -1;
        }
        q *= q * q;
        // printf("%d\n", q);

        printf("The sum of cube of every digit of the numbers entered is: %d", p
+ q + x + y);
    }
    else
    {
        printf("Wrong choice");
    }
}
```

Que5- Write a program to check whether the year is leap or not.

```c
#include <stdio.h>
void main(){
    int a;
    printf("Enter a year \n");
    scanf("%d",&a);
```

```c
    if(a%400==0)
    printf("The entered year %d: is a leap year.",a);
    else if (a%100==0)
    printf("The entered year %d is not a leap year.", a);
    else if(a%4==0)
    printf("The entered year %d is a leap year.", a);
    else
    printf("The entered year %d is not a leap year.");
}
```

Que6-Write a program to check whether the character is alphabet or not.

```c
#include <stdio.h>
void main(){
    char a;
    printf("Enter a character \n");
    scanf("%c",&a);
    if (a >= 'a' && a <= 'z' || a >= 'A' && a <= 'Z')
    printf("The character entered is an alphabet.");
    else
    printf("The character entered is not an alphabet");
}
```

Que7- Write a program to input any character and check whether its an alphabet, a digit or a special character.

```c
#include <stdio.h>
void main(){
    char a;
    printf("Enter a character \n");
    scanf("%c",&a);
    if (a >= 'a' && a <= 'z' || a >= 'A' && a <= 'Z')
    printf("The entered character %c is an alphabet.",a);
    else if( a >= '0' && a <= '9')
    printf("The entered character %c is an integer.",a);
    else
    printf("The entered character %c is a special character",a);
}
```

Que8- Write a program whether the triangle is isosceles triangle, scalene triangle, or an equilateral triangle.

```c
#include <stdio.h>
void main(){
    float a, b, c;
    printf("Enter the verrtices of the traingle\n");
    scanf("%f%f%f", &a, &b, &c);
    if (a==b && b==c)
    printf("The tringle is an equilateral traingle.");
    else if(a==b || a==c || b==c)
    printf("The traingle is an isoscale traingle.");
    else
    printf("The traingle is a scalene traingle.");
}
```