Assignment 7

Q1. Write a program to find how many times a function is being called (use local static variable as count)

Q2. Try register storage class for local, global variables. Can we get address of register variable

Q3. Try some nested calls
sqrt(pow(2,abs(x))), putchar(toupper(ch)) etc

Q4. Write a function to swap two variables using Pass by value, Pass by reference

Q5. Write a single function to return sum, product of two no.s

Q6. Whats wrong in this code, any fixes to the problem?

```
int* test(int x)
{
        int y=x*x;
        return &y;
}
```

Q7. Try conversions between int*, const int* while passing parameters to functions

```
int *p;
const int *q;
```

test(p); void test(const int*);
test(q); void test2(int *);

Q8. Passing 1D, 2D arrays to a function
– sum, min, max of array elements
– Matrix operations

Q9. Can you return arrays from a function
(a) base address
(b) whole array

Q10. Function Pointers
-Write a simple program to test function pointer
- typedef for function pointer

```
typedef int (*pftype)( );
pftype pf1;

(or) typedef int (*pftype)(int, int);
```

```
        pf1=sum; pf1(10,20);
```
- Menu driven programs without if,else,switch(array of function pointers)
- Rewrite this code using typedef

Q 12. Passing function names as parameters

```
void test(int x, int y, int (*fp) (int,int))
{
        int z = fp(x,y);
        ----
}
test(10,20,sum);
```