TASK 01

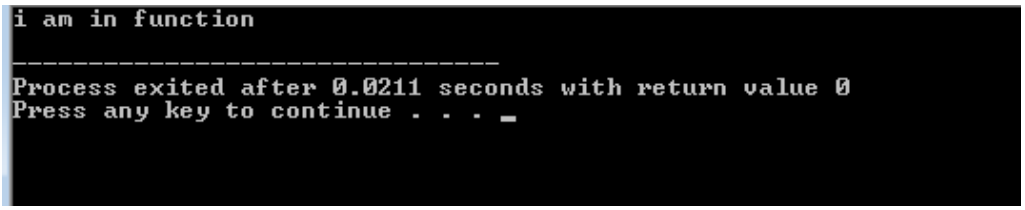
Compile all sample programs and observe the output of each code to get familiar with the syntax

Sample 1

Code:

```
#include<iostream>

using namespace std;

void print()

{

cout<<"i am in function"<<endl;

}

main()

{          print();

}
```

Output:



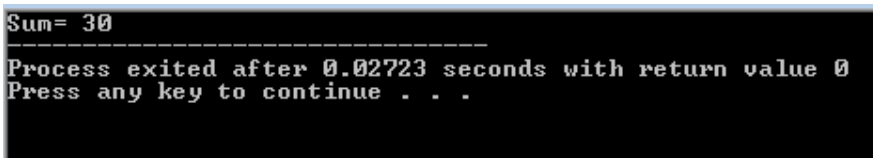
Sample 2

Code:

```
#include<iostream>

using namespace std;

int sum(int,int);

int sum(int x,int y)

{

return x+y;
```

```
}
main()
{
 int a=10;
 int b=20;
 int z;
 z= sum(a,b);
 cout<<"Sum= "<<z;
 }
```

Output:



Sample 3

Code:

```
#include<iostream>
using namespace std;
int sub(int x,int y)
{
        int z;
   z=x-y;
   return z;       }
main()
{
int a=20,b=10,c=5,d,e,f;
d=sub(a,b);
cout<<"result of first subtraction is "<<d<<endl;
e=sub(20,10);
```

```
cout<<"result of second subtraction is "<<e<<endl;

cout<<"result of third subtraction is "<<sub(20,10)<<endl;

f=10+sub(a,10);

cout<<"10 +       result of subtraction is " <<f<<endl;

}
```

Output:

```
result of first subtraction is 10
result of second subtraction is 10
result of third subtraction is 10
10 +    result of subtraction is 20

--------------------------------
Process exited after 0.00733 seconds with return value 0
Press any key to continue . . .
```

Task 2

Give answers to the following.

1. Write the declaration of a function named: power, to compute x^n.
   Syntax: void power(x,n);

2. Call the function: int factorial(int) ;
   Syntax: factorial(a);

3. Which of these are valid function declarations:

- void function(); Valid
- void function(void); Valid
- void function(int); Valid
- function(int); Invalid
- int function(); Valid

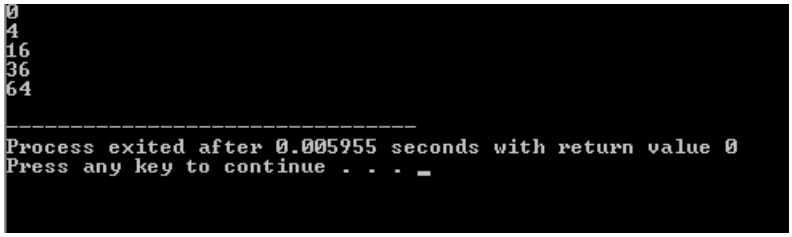
Write the output of the following code fragments.

Ques 1:

```
#include<iostream>

using namespace std;
```

```
int square(int);

int main()

{

for(int i=0;i<10;i+=2)

cout << square(i) << endl;

return 0;

}

int square(int a)

{

return a*a;

}
```

Output:



Ques 2:

```
#include<iostream>

using namespace std;

int minimum(int,int);

int main()

{

int x=10,y=5;

int m = minimum(x,y);

cout<<m<<endl;

return 0;

}
```

```
int minimum(int a,int b)
{
if (a<b)
return a;
else
return b;
}
```

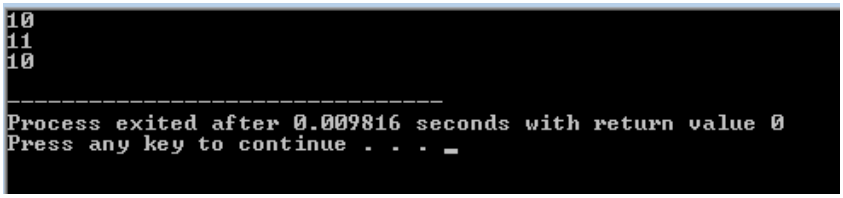
Output:

Ques 3:

```
#include<iostream>
using namespace std;
void increment(int); int main()
{
int x=10;
cout<< x <<endl;
increment(x);
cout<< x <<endl;
return 0;
}
void increment(int x)
{
x++;
cout<< x <<endl;
```

}

Output:



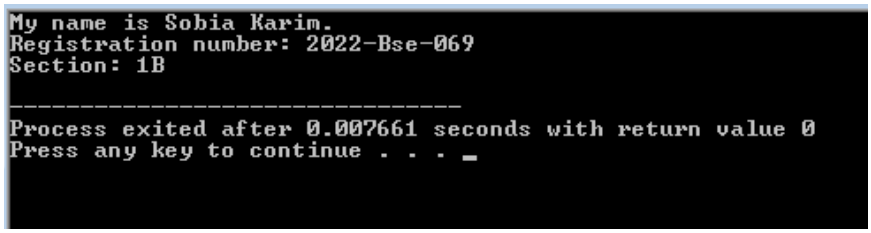
Task 3

Create a function which display your Name, Reg no, Class, Section. Display all the things within the body of function, call the function in main.

Code:

```
#include<iostream>
using namespace std;
void display();
main()
{
  display();
}
void display()
{
   cout<<"My name is Sobia Karim. \n";
   cout<<"Registration number: 2022-Bse-069 \n";
   cout<<"Section: 1B\n";
}
```

Output:



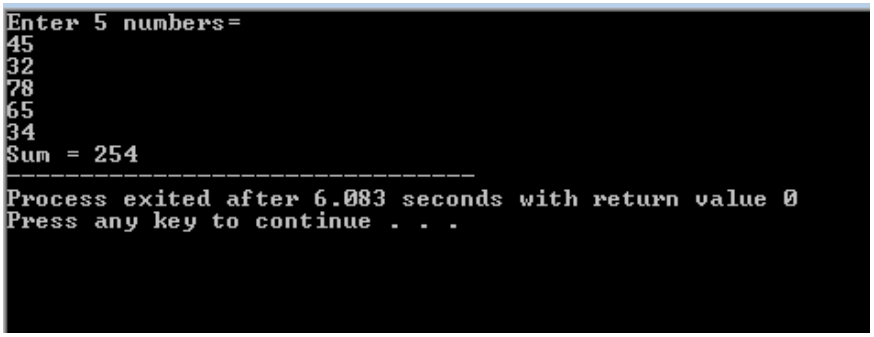
Task 4

Create a function SUM in C++ which calculates and return the sum of 5 numbers entered by user.

Code;

```
#include<iostream>
using namespace std;
int SUM(int,int,int,int,int);
main()
{
  int a,b,c,d,e;
  cout<<"Enter 5 numbers= \n";
  cin>>a>>b>>c>>d>>e;
  cout<<"Sum = "<<SUM(a,b,c,d,e);
}
int SUM(int a,int b,int c,int d,int e)
{
   return a+b+c+d+e;
}
```

Output:



Task 5

Create a function is_even which take a number as argument, return TRUE if number is even.Take number from user at run time.

Code:

```
#include<iostream>
```

```
using namespace std;
int is_even(int);
main()
{
  int a;
  cout<<"Enter a numbers= \n";
  cin>>a;
  cout<<"\nReturned Value is "<<is_even(a)<<endl<<endl;
  cout<<"{We know returned 1 means TRUE and 0 means FALSE. \n";
}
int is_even(int a)
{
   bool  b1 = true;
    bool b2 = false;
   if(a%2==0)
      return b1;
   else
       return b2;
}
```

Output:

```
Enter a numbers=
8

Returned Value is 1

{We know returned 1 means TRUE and 0 means FALSE.

--------------------------------
Process exited after 1.915 seconds with return value 0
Press any key to continue . . .
```