Question number 01

```cpp
#include <iostream>

using namespace std;


int main()

{

        int s , i;


        cout<<"Enter range of arrays here : ";

        cin>>s;

        int array[s];

        for(i=0;i<s;i++){

                cout<<"Enter value number"<<i+1<<": ";

                cin>>array[i];

        }


        cout<<"The number in reverse order are : "<<endl;

        for(i=s-1;i>=0;i--){

                cout<<array[i]<<" ";

        }


return 0;

}
```

```
Enter range of arrays here : 6
Enter value number1: 1
Enter value number2: 2
Enter value number3: 3
Enter value number4: 4
Enter value number5: 5
Enter value number6: 6
The number in reverse order are :
6 5 4 3 2 1
---------------------------------
Process exited after 6.161 seconds with return value 0
Press any key to continue . . .
```

Question number 02

```cpp
#include <iostream>

using namespace std;

int main()
    {
    int s , i , sum=0;

    cout<<"Enter range of arrays here : ";
    cin>>s;
    int array[s];
    for(i=0;i<s;i++){
            cout<<"Enter value number"<<i+1<<": ";
            cin>>array[i];
            sum+=array[i];
```
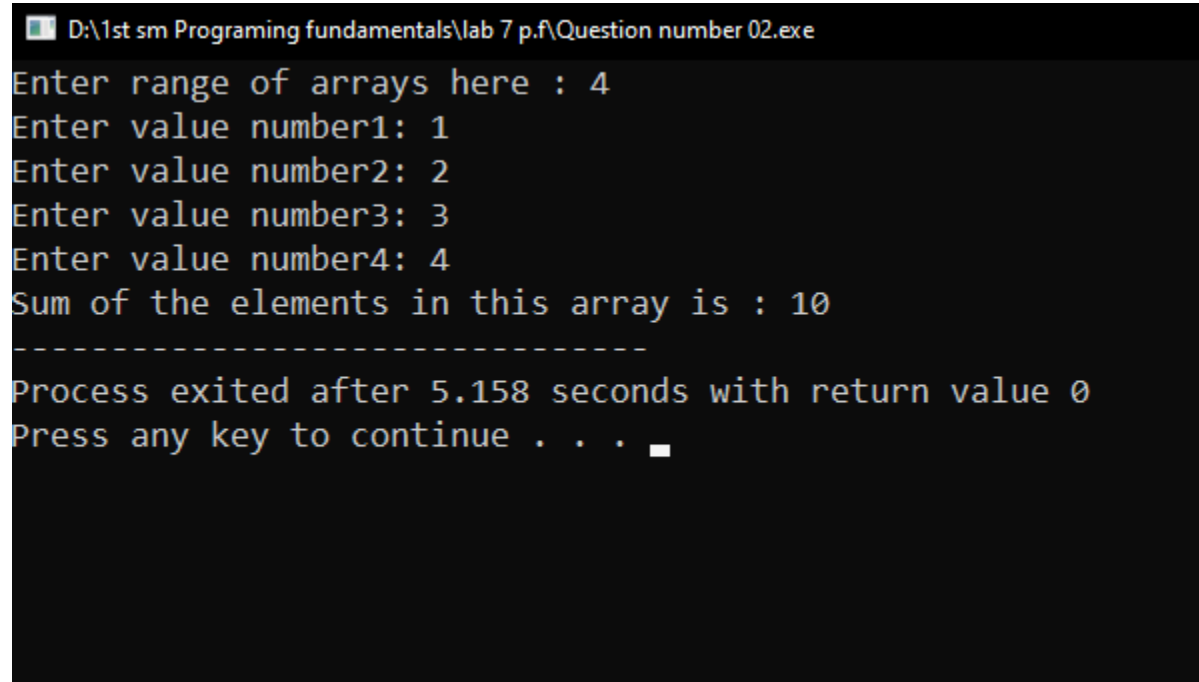
}

        cout<<"Sum of the elements in this array is : "<<sum;

return 0;

}

```
D:\1st sm Programing fundamentals\lab 7 p.f\Question number 02.exe
Enter range of arrays here : 4
Enter value number1: 1
Enter value number2: 2
Enter value number3: 3
Enter value number4: 4
Sum of the elements in this array is : 10
--------------------------------
Process exited after 5.158 seconds with return value 0
Press any key to continue . . . _
```

Question number 03

```cpp
#include <iostream>

using namespace std;


int main()

{

        int  i ;

        float  sum=0;


        int array[10]={1,2,3,4,5,6,7,8,9,10};
```
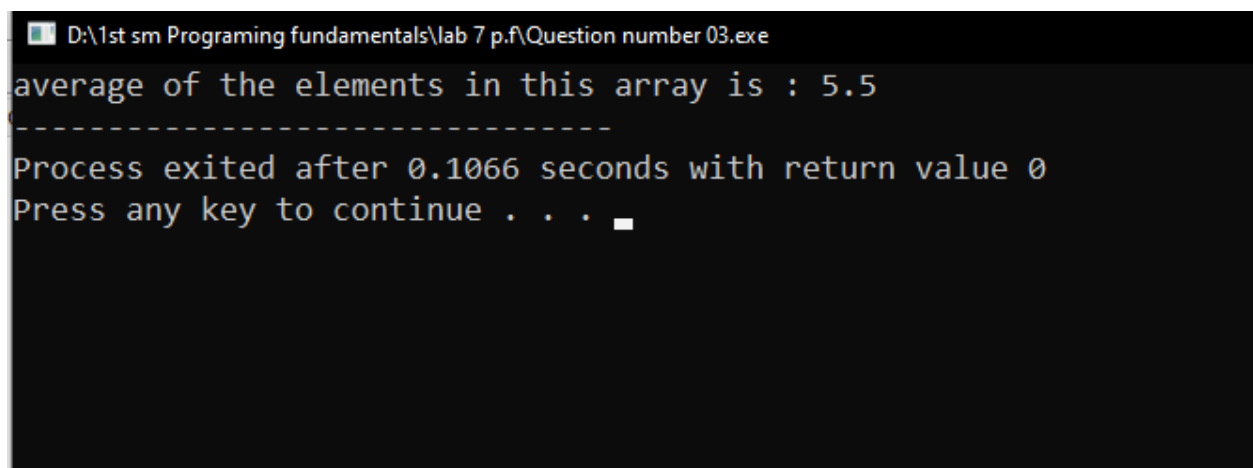
```cpp
        for(i=0;i<10;i++){

                sum+=array[i];

        }


        cout<<"average of the elements in this array is : "<<sum/10;


return 0;

}
```



```
D:\1st sm Programing fundamentals\lab 7 p.f\Question number 03.exe

average of the elements in this array is : 5.5
-------------------------------
Process exited after 0.1066 seconds with return value 0
Press any key to continue . . .
```

Question number 04

```cpp
#include <iostream>

using namespace std;


int main()

{

        int i , s;


        cout<<"Enter the array range here : ";

        cin>>s;


        int array1[s] , array2[s];
```

```cpp
	for(i=0;i<s;i++){
		cout<<"Enter value "<<i+1<<" Here :  ";
		cin>>array1[i];
	}


	for(i=0;i<s;i++){
		array2[i]=array1[i];
	}


	cout<<"The value of the first arrays are "<<endl;
	for(i=0;i<s;i++){
		cout<<array1[i]<<" ";
	}


	cout<<endl<<"The value of the second arrays are "<<endl;
	for(i=0;i<s;i++){
		cout<<array2[i]<<" ";
	}

return 0;
}
```

```
D:\1st sm Programing fundamentals\lab 7 p.f\Question number 04.exe

Enter the array range here : 4
Enter value 1 Here :  1
Enter value 2 Here :  2
Enter value 3 Here :  45
Enter value 4 Here :  10
The value of the first arrays are
1 2 45 10
The value of the second arrays are
1 2 45 10
--------------------------------
Process exited after 11.29 seconds with return value 0
Press any key to continue . . . ▄
```

Question number 05

#include <iostream>

using namespace std;

int main()

{

    int i , s;

    cout<<"Enter the array range here : ";

    cin>>s;

    int array[s];

    for(i=0;i<s;i++){

```cpp
            cout<<"Enter value "<<i+1<<" Here :  ";

            cin>>array[i];

        }

        cout<<"The EVEN numbers are : "<<endl;

        for(i=0;i<s;i++){

            if(array[i]%2==0){

                cout<<array[i]<<" ";

            }

        }



    return 0;

}
```
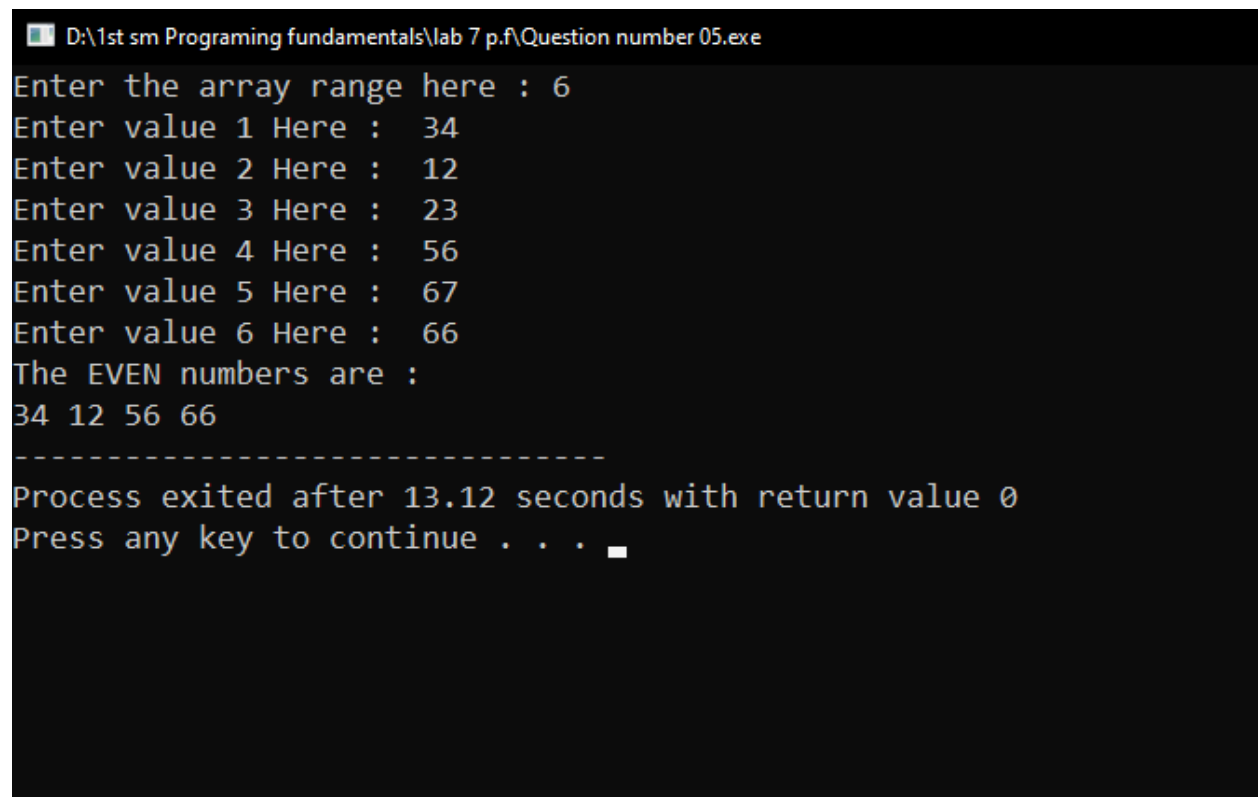
```
D:\1st sm Programing fundamentals\lab 7 p.f\Question number 05.exe

Enter the array range here : 6
Enter value 1 Here :   34
Enter value 2 Here :   12
Enter value 3 Here :   23
Enter value 4 Here :   56
Enter value 5 Here :   67
Enter value 6 Here :   66
The EVEN numbers are :
34 12 56 66
-------------------------------
Process exited after 13.12 seconds with return value 0
Press any key to continue . . . _
```

Question number 06

#include <iostream>

```cpp
using namespace std;

int main()
{
        int i , s;

        cout<<"Enter the array range here : ";
        cin>>s;

        int array[s];

        for(i=0;i<s;i++){
                cout<<"Enter value "<<i+1<<" Here :  ";
                cin>>array[i];
        }
        cout<<"The value on ODD indicies are : "<<endl;
        for(i=0;i<s;i++){
                if(i%2!=0){
                        cout<<array[i]<<" ";
                }
        }

        return 0;
}
```

```
D:\1st sm Programing fundamentals\lab 7 p.f\Question number 06.exe

Enter the array range here : 4
Enter value 1 Here :  1
Enter value 2 Here :  2
Enter value 3 Here :  3
Enter value 4 Here :  4
The value on ODD indicies are :
2 4
-----------------------------------
Process exited after 7.299 seconds with return value 0
Press any key to continue . . .
```

Question number 07

```cpp
#include <iostream>

using namespace std;


int main()

{


        int i , s , c=1;


        cout<<"Enter the array range here : ";

        cin>>s;


        int array1[s] , array2[s];


        for(i=0;i<s;i++){

                cout<<"Enter value "<<i+1<<" Here :  ";

                cin>>array1[i];

        }
```

```cpp
        for(i=0;i<s;i++){

                array2[i]=array1[s-c];

                c++;

        }


        cout<<"The value of the first arrays are "<<endl;
        for(i=0;i<s;i++){

                cout<<array1[i]<<" ";

        }


        cout<<endl<<"The value of the second arrays are "<<endl;
        for(i=0;i<s;i++){

                cout<<array2[i]<<" ";

        }

return 0;
}
```

```
D:\1st sm Programing fundamentals\lab 7 p.f\Question number 07.exe

Enter the array range here : 4
Enter value 1 Here :  12
Enter value 2 Here :  45
Enter value 3 Here :  54
Enter value 4 Here :  23
The value of the first arrays are
12 45 54 23
The value of the second arrays are
23 54 45 12
---------------------------------
Process exited after 9.924 seconds with return value 0
Press any key to continue . . .
```

Question number 08

#include <iostream>

using namespace std;

int main()

{

       int i;

       int array1[5]={1,2,3,4,5};

       int array2[5]={1,2,3,4,5};

       int array3[5];

       cout<<"The values of first array are : "<<endl;

       for(i=0;i<5;i++){

```cpp
            cout<<array1[i]<<" ";
        }

        cout<<endl;

        cout<<"The values of second array are : "<<endl;
        for(i=0;i<5;i++){
            cout<<array2[i]<<" ";
        }

        for(i=0;i<5;i++){
            array3[i]=array2[i]+array1[i];
        }

        cout<<endl;

        cout<<"The values of third array are : "<<endl;
        for(i=0;i<5;i++){
            cout<<array3[i]<<" ";
        }

    return 0;
}
```

```
The values of first array are :
1 2 3 4 5
The values of second array are :
1 2 3 4 5
The values of third array are :
2 4 6 8 10
--------------------------------
Process exited after 0.09935 seconds with return value 0
Press any key to continue . . .
```

Question number 09

```cpp
#include <iostream>

using namespace std;


int main()
{
        int count=0;

        int array1[5]={1,2,3,4,5};

        int array2[4]={6,7,8,9};

        int array3[9];



        cout<<"Value of first array are : "<<endl;
```

```cpp
for(int i=0;i<5;i++){
        cout<<array1[i]<<" ";
}

cout<<endl;
cout<<"Value of second array are : "<<endl;

for(int i=0;i<4;i++){
        cout<<array2[i]<<" ";
}

        for(int i=0;i<5;i++){
                array3[count]=array1[i];
                count++;
        }
        for(int i=0;i<4;i++){
                array3[count]=array2[i];
                count++;
}

cout<<endl;
cout<<"Value of third array are : "<<endl;

for(int i=0 ; i<9 ; i++)
{
        cout<<array3[i]<<" ";
}
```
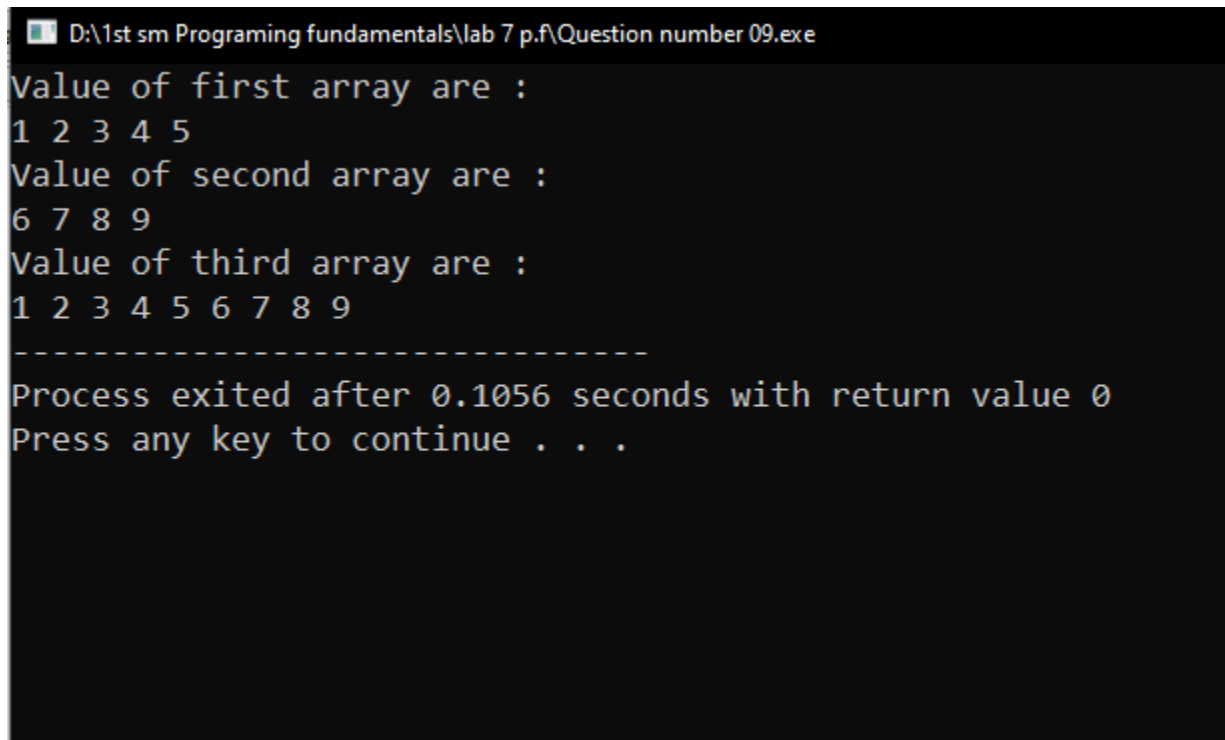
```
return 0;

}
```


Question number 10

```
#include <iostream>

#include <string>

using namespace std;


int main()

{

        int i , student_no=0;


        cout<<"Enter number of students here : ";

        cin>>student_no;


        string student_name[student_no];

        int  programming[student_no];
```

```cpp
int  maths[student_no];

int  english[student_no];

int  ps[student_no];

float  obtained , percentage;

char grade;


for( i=0 ; i<student_no ;i++){

        cout<<"Enter student "<<i+1<<" name here : ";

        cin>>student_name[i];

        cout<<"Enter student "<<i+1<<" marks for programming fundamentals here : ";

        cin>>programming[i];

        cout<<"Enter student "<<i+1<<" marks for maths here : ";

        cin>>maths[i];

        cout<<"Enter student "<<i+1<<" marks for english here : ";

        cin>>english[i];

        cout<<"Enter student "<<i+1<<" marks for ps here : ";

        cin>>ps[i];

        cout<<endl;

}
cout<<endl<<endl;




for( i=0 ; i<student_no ;i++){

        obtained=programming[i]+maths[i]+english[i]+ps[i];

        percentage=(obtained/400)*100;

        if(percentage>=80&&percentage<=100){

                grade='A';

        }
```

```cpp
			if(percentage>=70&&percentage<=79){

				grade='B';

			}

			if(percentage>=60&&percentage<=69){

				grade='C';

			}

			if(percentage>=0&&percentage<60){

				grade='F';

			}

			cout<<student_name[i]<<"\t"<<
programming[i]<<"\t"<<maths[i]<<"\t"<<english[i]<<"\t"<<ps[i]<<"\t"<<obtained<<"\t"<<percentage<<"
\t"<<grade<<endl;

		}




return 0;

}
```

```
D:\1st sm Programing fundamentals\lab 7 p.f\Question number 10.exe
Enter number of students here : 2
Enter student 1 name here : Siraj
Enter student 1 marks for programming fundamentals here : 67
Enter student 1 marks for maths here : 89
Enter student 1 marks for english here : 99
Enter student 1 marks for ps here : 89

Enter student 2 name here : Ahmed
Enter student 2 marks for programming fundamentals here : 78
Enter student 2 marks for maths here : 89
Enter student 2 marks for english here : 98
Enter student 2 marks for ps here : 66



Siraj    67        89        99        89        344       86        A
Ahmed    78        89        98        66        331       82.75     A


---------------------------------
Process exited after 26.91 seconds with return value 0
Press any key to continue . . .
```

Question number 11

#include <iostream>

using namespace std;

int main()

{

    int s , i , j;

    cout<<"Enter the array range : ";

    cin>>s;

    int array[s];

    for(i=0 ; i<s ; i++){

        cout<<"Enter value "<<i+1<<" ";

        cin>>array[i];

```cpp
        }


        for(i=0 ; i<s ; i++){

                        for( j=i+1;j<s;j++){

                                if(array[i]>array[j]){

                                        int c;

                                        c=array[i];

                                        array[i]=array[j];

                                        array[j]=c;

                                }

                        }

        }


        cout<<"The smallest value is : "<<array[0];


return 0;

}
```

```
D:\1st sm Programing fundamentals\lab 7 p.f\Question number 11.exe
Enter the array range : 4
Enter value 1 1
Enter value 2 2
Enter value 3 36
Enter value 4 67
The smallest value is : 1
---------------------------------
Process exited after 8.317 seconds with return value 0
Press any key to continue . . .
```

Question number 12

```cpp
#include <iostream>

using namespace std;


int main()
{
        int s , i , j;
        cout<<"Enter the array range : ";
        cin>>s;
        int array[s];
        for(i=0 ; i<s ; i++){
                cout<<"Enter value "<<i+1<<" ";
                cin>>array[i];
```

```cpp
        }
            for(i=0 ; i<s ; i++){
                for( j=i+1;j<s;j++){
                    if(array[i]>array[j]){
                        int c;
                        c=array[i];
                        array[i]=array[j];
                        array[j]=c;
                    }
                }

            }

        cout<<"The largest value is : "<<array[s-1];

return 0;
}
```

```
Enter the array range : 5
Enter value 1 67
Enter value 2 78
Enter value 3 45
Enter value 4 89
Enter value 5 77
The largest value is : 89
---------------------------------
Process exited after 7.923 seconds with return value 0
Press any key to continue . . .
```

Question number 13

```cpp
#include <iostream>

using namespace std;



int main()

{

        int s , i , sea;

        bool check=false;



        cout<<"Enter the array range : ";

        cin>>s;

        int array[s];

        for(i=0 ; i<s ; i++){

                cout<<"Enter value "<<i+1<<" :  ";

                cin>>array[i];

        }



        cout<<"Enter the value you wanna search from this array : ";
```

```cpp
cin>>sea;

for(i=0 ; i<s ; i++){

        if(sea==array[i]){

        check=true;

        break;}

}

if(check==true)

cout<<array[i]<<" is present at the "<<i+1<<" index ";

else

cout<<sea<<"  is not present in this array here ";


return 0;

}
```

```
D:\1st sm Programing fundamentals\lab 7 p.f\Question number 13.exe

Enter the array range : 6
Enter value 1 :  23
Enter value 2 :  34
Enter value 3 :  56
Enter value 4 :  78
Enter value 5 :  90
Enter value 6 :  74
Enter the value you wanna search from this array : 56
56 is present at the 3 index
--------------------------------
Process exited after 18.56 seconds with return value 0
Press any key to continue . . .
```