Question 1 (8 points)

Write a C++ to create an array **numbers[5]** with integer value and create a functions void input(int numbers[5]), void output(int numbers[5]), int max(int numbers[5]), int min(int numbers[5]);

- **void input**(int numbers[5])**:** use input statement to input the values.
- **void output**(int numbers[5])**:** use output statement to print the values.
- **int max**(int numbers[5])**:** finds the maximum value and returns the maximum.
- **int min**(int numbers[5])**:** finds the minimum value and returns the minimum.

Answer:

```cpp
#include <iostream>
using namespace std;
int numbers[5];
void input()
{

 for(int i=0; i<5; i++)
 {
 cout<<"Enter the value of input: ";
 cin>>numbers[i];
 }
 }
void output()
{

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

 cout<<"The entered values is :
"<<numbers[i]<<endl;
 }

 }
int max()
{
 int max=numbers[0];
 for(int i=0; i<4; i++)
 {
```

```cpp
 if(max<numbers[i+1])
 max=numbers[i+1];
 }
 return max;


 }
int min()
{
 int min=numbers[0];
 for ( int i=0; i<4; i++)
 {

 if ( min>numbers[i+1])
 min=numbers[i+1];
 }
 return min;

}
int main()
{
 input();
 output();
 cout<<"The maximum value is
"<<max()<<endl;
 cout<<"The minimum value is "<<min();
 return 0;
}
```

```
Sample
Enter the value of input: 15
Enter the value of input: 98
Enter the value of input: 45
Enter the value of input: 12
Enter the value of input: 75
The entered values is : 15
The entered values is : 98
The entered values is : 45
The entered values is : 12
The entered values is : 75
The maximum value is 98
The minimum value is 12
```

Question 2 (6)

An array stores salary of 25 employees of a company. Write lines of code to create such an array. It then adds 5% to the salary of each employee if its salary is less than 3500 SR and <u>prints</u> <u>out the number of employees whose salaries is raised</u>.

Answer:

```cpp
#include <iostream>
using namespace std;
int main()
{
 double salary [25];
 double newsalary[25];
 int i,nb=0;
 for(i=0;i<25;i++)
 {
 cout<<"Enter the salary of employee "<<i+1<<" =";
 cin>>salary[i];
 if (salary[i]<=3500)
 {
 newsalary[i]=(salary[i]*1.05);
 nb++;
 }
 else
 newsalary[i]=salary[i];
 }
 cout <<"\n the number of employees whose
salaries is raised: "<<nb<<endl;
 for(i=0;i<25;i++)
 {
 cout<<"The new salary of employee"<<i+1<<"is:
"<<newsalary[i]<<" SR"<<endl;
 }
 return 0;
```

```
Enter the salary of employee 1 =2800
Enter the salary of employee 2 =3500
Enter the salary of employee 3 =2000
Enter the salary of employee 4 =4500
Enter the salary of employee 5 =3750
Enter the salary of employee 6 =9800
Enter the salary of employee 7 =6500
Enter the salary of employee 8 =3200
Enter the salary of employee 9 =5500
Enter the salary of employee 10 =4500
Enter the salary of employee 11 =1800
Enter the salary of employee 12 =3800
Enter the salary of employee 13 =4900
Enter the salary of employee 14 =7500
Enter the salary of employee 15 =1700
Enter the salary of employee 16 =3600
Enter the salary of employee 17 =8000
Enter the salary of employee 18 =2500
Enter the salary of employee 19 =8000
Enter the salary of employee 20 =4500
Enter the salary of employee 21 =3900
Enter the salary of employee 22 =6700
Enter the salary of employee 23 =2300
Enter the salary of employee 24 =3000
Enter the salary of employee 25 =7400

 the number of employees whose salaries is
raised: 9
The new salary of employee1is: 2940 SR
The new salary of employee2is: 3675 SR
The new salary of employee3is: 2100 SR
The new salary of employee4is: 4500 SR
The new salary of employee5is: 3750 SR
The new salary of employee6is: 9800 SR
The new salary of employee7is: 6500 SR
The new salary of employee8is: 3360 SR
The new salary of employee9is: 5500 SR
The new salary of employee10is: 4500 SR
The new salary of employee11is: 1890 SR
The new salary of employee12is: 3800 SR
The new salary of employee13is: 4900 SR
The new salary of employee14is: 7500 SR
The new salary of employee15is: 1785 SR
The new salary of employee16is: 3600 SR
The new salary of employee17is: 8000 SR
The new salary of employee18is: 2625 SR
The new salary of employee19is: 8000 SR
The new salary of employee20is: 4500 SR
The new salary of employee21is: 3900 SR
The new salary of employee22is: 6700 SR
The new salary of employee23is: 2415 SR
The new salary of employee24is: 3150 SR
The new salary of employee25is: 7400 SR
```

Question 3 (6 marks) Write a program to calculate the total expenses.

- Create 2 arrays, take its size from users, one for Quantity and another for Price per item are input by the user.
- Create a function in which the arrays created will be passed as parameters to calculate the total expenses.

Answer:

```cpp
#include <iostream>
using namespace std;
int total(int a[],int b[],int size)
{
   int s=0;
for(int i=0;i<size;i++)
s=s+a[i]*b[i];
return s;
   }
int main()
{  int N;
   cout<<"Enter the number of
purchases:";
   cin>>N;
   int quantity[N],price[N];
   cout<<"Now you enter the
quantity of each item:"<<endl;
   for(int i=0;i<N;i++)
   {

cout<<"quantity["<<i+1<<"]=";
   cin>>quantity[i];
      }
   cout<<"Now you enter the
price of each item:"<<endl;
   for(int i=0;i<N;i++)
   {

cout<<"price["<<i+1<<"]=";
   cin>>price[i];
      }
   cout<<"The total expenses is
"<<total(quantity,price,N)<<"
SR";
   return 0;
   }
```

```
Enter the number of purchases:3
Now you enter the quantity of each item:
quantity[1]=4
quantity[2]=5
quantity[3]=3
Now you enter the price of each item:
price[1]=4
price[2]=7
price[3]=2
The total expenses is 57 SR
```