Q1 CODE

```cpp
1  #include <iostream>
2  using namespace std ;
3
4  class english {
5      public:
6
7      string Sentence ;
8      int size ;
9      english(){
10         Sentence="";
11         size=0;
12     }
13
14
15  void count (){
16      int count =0;
17         for (int i=0;Sentence[i]!= '\0';i++){
18
18
19      count ++;
20         }
21         size=count;
22     }
23
24      english (const  english & obj){
25         Sentence=obj.Sentence;
26         size=obj.size;
27     }
28
29      void input(){
30         cout<<"Enters the sentence "<<endl;
31         getline(cin,Sentence);
32
33     }
```
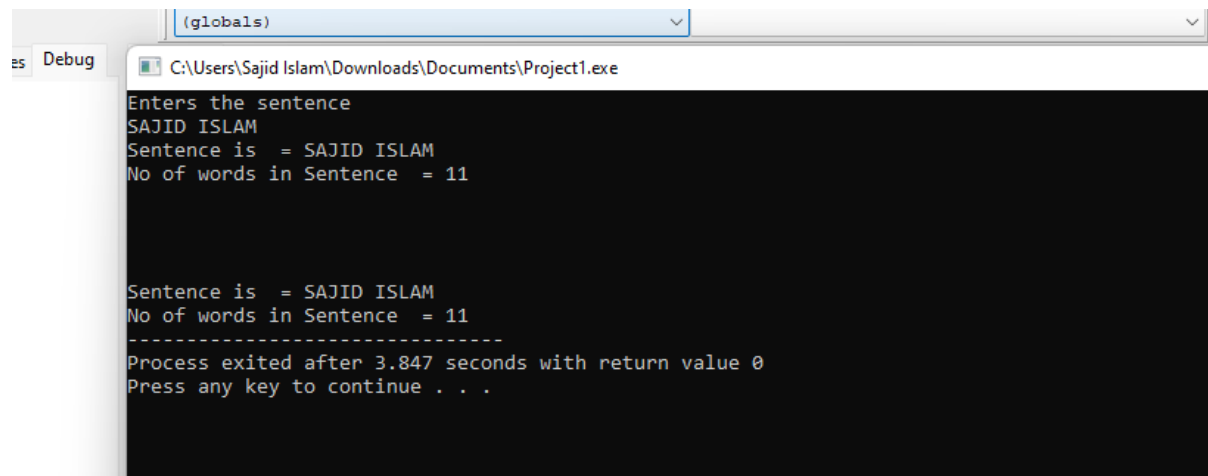
```
33 |    }
34 | };
35
36 □ int main(int argc, char** argv) {
37
38       english obj;
39       obj.input();
40       obj.count();
41       english obj2(obj);
42       |
43       cout<<"Sentence is  = "<<obj.Sentence<<endl;
44       cout<<"No of words in Sentence  = "<<obj.size;
45
46       cout<<"\n \n \n \n "<<endl;
47       cout<<"Sentence is  = "<<obj2.Sentence<<endl;
48       cout<<"No of words in Sentence  = "<<obj2.size;
49
50       return 0;
51 | }
```

OUTPUT

```
(globals)

es  Debug    ■ C:\Users\Sajid Islam\Downloads\Documents\Project1.exe

Enters the sentence
SAJID ISLAM
Sentence is  = SAJID ISLAM
No of words in Sentence  = 11




Sentence is  = SAJID ISLAM
No of words in Sentence  = 11
-------------------------------
Process exited after 3.847 seconds with return value 0
Press any key to continue . . .
```

Q2 code

```cpp
1   #include<iostream>
2   using namespace std ;
3
4   class Serial {
5       private :
6           static int count;
7           int SerialNumber ;
8           public :
9
10          Serial(){
11              count++;
12              // i assigned the count to serial number so that it will get the unique value each time when constructor calls
13              SerialNumber=count;
14
15
16          }
17          void Unique(){
18              cout<<"This is object No  "<<SerialNumber<<endl;
19          }
20          static void TotalObject(){
21              cout<<"Count of Total Object is = "<<count<<endl;

22          }
23
24  };
25
26  int Serial :: count =0;
27
28  int main(){
29
30      Serial obj1 ,obj2, obj3 ;
31      obj1.Unique();
32      obj2.Unique() ;
33      obj3.Unique() ;
34      Serial ::TotalObject();
35
36
37
38
39
40
41      return 0;
42  }
```

Code output

Project3 - [Project3.dev] - [Executing] - Dev-C++ 5.11

```
C:\Users\Sajid Islam\Downloads\Documents\Project3.exe

This is object No  1
This is object No  2
This is object No  3
Count of Total Object is = 3

------------------------------
Process exited after 0.01818 seconds with return value 0
Press any key to continue . . .
```

Q3 code

```cpp
1   #include <iostream>
2   using namespace std ;
3
4
5   class Time {
6
7       public :
8
9       int Seconds;
10      int Minutes ;
11      int Hours ;
12
13      Time (){
14
15        Seconds=0;
16        Minutes =0;
17        Hours =0;
18      }
```

```cpp
19
20     Time (int H, int M , int S){
21         Seconds =S;
22         Minutes=M ;
23         Hours=H;
24
25     }
26
27     void Display() const{
28         cout<<"Time is  "<< Hours <<":"<<Minutes<<":"<<Seconds <<endl;
29     }
30
31     void AddTime(const Time &t1, const Time &t2) {
32         Seconds = t1.Seconds + t2.Seconds;
33         Minutes = t1.Minutes + t2.Minutes;
34         Hours = t1.Hours + t2.Hours;
35
35
36         |
37         if (Seconds >= 60) {
38             Seconds -= 60;
39             Minutes++;
40         }
41         if (Minutes >= 60) {
42             Minutes -= 60;
43             Hours++;
44         }
45     }
46
47
48
49  };
50
51
53  int main(int argc, char** argv) {
54
55
56      const Time t1(2, 45, 50);  // 2 hours, 45 minutes, 50 seconds
57      const Time t2(1, 30, 20);  // 1 hour, 30 minutes, 20 seconds
58
59
60      Time t3;
61
62
63      t3.AddTime(t1, t2);
64
65
66      cout << "Time 1 ";
67      t1.Display();
68
69      cout << "Time 2 ";
```
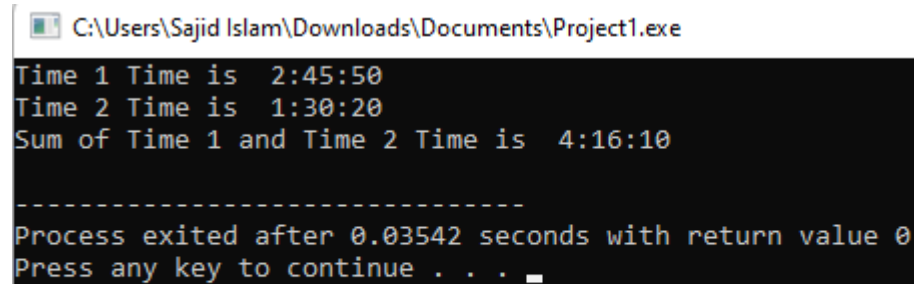
```
69        cout << "Time 2 ";
70        t2.Display();
71
72        cout << "Sum of Time 1 and Time 2 ";
73        t3.Display();
74
75
76
77
78
79
80
81        return 0;
82  }
```

Q3 output

C:\Users\Sajid Islam\Downloads\Documents\Project1.exe

```
Time 1 Time is  2:45:50
Time 2 Time is  1:30:20
Sum of Time 1 and Time 2 Time is  4:16:10

--------------------------------
Process exited after 0.03542 seconds with return value 0
Press any key to continue . . .
```