

```

1 #include<iostream.h>
2 #include<conio.h>
3 #include<math.h>
4 int main()
5 {
6     clrscr();
7     int ch;
8     double l,b,a,p,d;
9     cout<<"\nEnter length of a rectangle:>";
10    cin>>l;
11    cout<<"\nEnter breadth of a rectangle:>";
12    cin>>b;
13    a=l*b;
14    p=2*(l+b);
15    d=sqrt(l*l+b*b);
16    clrscr();
17    cout<<"*****MENU*****"
18        <<"\n1. Find Area"
19        <<"\n2. Find Perimeter"
20        <<"\n3. Find Diagonal"
21        <<"\n\nEnter your choice:>";
22    cin>>ch;
23    clrscr();
24    switch(ch)
25    {
26        case 1: cout<<"Area of rectangle is "
27                <<a<<" sq. units";
28                break;
29        case 2: cout<<"Perimeter of rectangle is "
30                <<p<<" units";
31                break;
32        case 3: cout<<"Diagonal of rectangle is "
33                <<d<<" units";
34                break;
35        default: cout<<"Wrong choice. ";
36    }
37    getch();
38    return 0;
39 }

```

Enter length of a rectangle:>3
Enter breadth of a rectangle:>4

*****MENU*****

1. Find Area
2. Find Perimeter
3. Find Diagonal

Enter your choice:>1
Area of rectangle is 12 sq. units_

Enter your choice:>2
Perimeter of rectangle is 14 units_

Enter your choice:>3
Diagonal of rectangle is 5 units

```

1  #include<iostream.h>
2  #include<conio.h>
3  #include<stdio.h>
4  int strlenth(char s[])
5  {
6      int i;
7      for(i=0;s[i]!='\0';i++);
8      return i;
9  }
10 int strcmpare(char s1[],char s2[])
11 {
12     int i,d=0;
13     for(i=0;s1[i]!='\0'&&s2[i]!='\0';i++)
14     {
15         if(s1[i]==s2[i])
16             d++;
17         else if(s1[i]>96&&s1[i]<123)//Small letter
18         { if(s1[i]==s2[i]+32)//If same letter
19             d++; }
20         else if(s1[i]>64&&s1[i]<90)//Big letter
21         { if(s1[i]==s2[i]-32)//If same letter
22             d++; }
23     }
24     if(d==strlenth(s1)&&d==strlenth(s2))
25         return 0;
26     else return 1;
27 }
28 char str[80];
29 void strjoin(char s1[],char s2[])
30 {
31     int i,j;
32     for(i=0;s1[i]!='\0';i++)
33         str[i]=s1[i];
34     str[i++]=' '; //Adding space
35     for(j=0;s2[j]!='\0';i++,j++)
36         str[i]=s2[j];
37 }
38 int main()
39 {
40     clrscr();
41     char str1[40],str2[40];
42     int ch;
43     cout<<"Enter first string:>";
44     gets(str1);
45     cout<<"Enter second string:>";
46     gets(str2);
47     cout<<"*****MENU*****"
48         <<"\n1. Find out length of a string"
49         <<"\n2. Compare two strings"
50         <<"\n3. Concatenate two strings"
51         <<"\nEnter your choice:>";
52     cin>>ch;
53     clrscr();
54     switch(ch)
55     {
56         case 1: cout<<"Length of first string is "
57                 <<strlenth(str1)
58                 <<" characters"<<endl;
59                 cout<<"Length of second string is"
60                 <<strlenth(str2)
61                 <<" characters"<<endl;
62                 break;
63         case 2: if(strcmpare(str1,str2)==0)
64                 cout<<"Both are same strings";

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65         else cout<<"Both are different string";
66         break;
67         case 3: strjoin(str1,str2);
68                 cout<<"Concatenated string is:\n"
69                 <<str;
70                 break;
71         default: cout<<"Wrong option selected!";
72     }
73     getch();
74     return 0;
75 }

```

Enter first string:>hello world
Enter second string:>hey there!

*****MENU*****

1. Find out length of a string
2. Compare two strings
3. Concatenate two strings

Enter your choice:>1

Length of first string is 11 characters
Length of second string is 10 characters

Enter first string:>Hello world
Enter second string:>hELLO WORLD

*****MENU*****

1. Find out length of a string
2. Compare two strings
3. Concatenate two strings

Enter your choice:>2

Both are same strings

Enter first string:>over
Enter second string:>dose

*****MENU*****

1. Find out length of a string
2. Compare two strings
3. Concatenate two strings

Enter your choice:>3

Concatenated string is:
overdose

```

1  #include<iostream.h>
2  #include<conio.h>
3  #include<math.h>
4  #define root3 1.732
5  void area()
6  {
7      cout<<"Area of point is undefined";
8  }
9  double area(double s)
10 {
11     double a=root3*s*s/4;
12     return a;
13 }
14 double area(double b,double h)
15 {
16     double a=b*h/2;
17     return a;
18 }
19 double area(double s1,double s2, double s3)
20 {
21     double a,s;
22     s=(s1+s2+s3)/2;
23     a=sqrt(s*(s-s1)*(s-s2)*(s-s3));
24     return a;
25 }
26
27 int main()
28 {
29     clrscr();
30     cout<<"*****MENU*****"
31         <<"\n1. Area of point"
32         <<"\n2. Area of equilateral triangle"
33         <<"\n3. Area of right-angled triangle"
34         <<"\n4. Area of scalene triangle"
35         <<"\n\nEnter your choice:>";
36     int ch;
37     cin>>ch;
38     float a,s1,s2,s3;
39     switch(ch)
40     {
41         case 1: area();
42                 getch();
43                 return 0;
44         case 2: cout<<"Enter side of triangle:>";
45                 cin>>s1;
46                 a=area(s1);
47                 break;
48         case 3: cout<<"Enter height:>";
49                 cin>>s1;
50                 cout<<"Enter base:>";
51                 cin>>s2;
52                 a=area(s1,s2);
53                 break;
54         case 4: cout<<"Enter 3 sides of
55 triangle:>\n";
56                 cin>>s1>>s2>>s3;
57                 a=area(s1,s2,s3);
58                 break;
59     }
60     cout<<"Area of triangle is "
61         <<a<<" sq. units";
62     getch();
63     return 0;
64 }

```

```

65 *****MENU*****
66 1. Area of point
67 2. Area of equilateral triangle
68 3. Area of right-angled triangle
   4. Area of scalene triangle

Enter your choice:>1
Area of point is undefined

*****MENU*****
1. Area of point
2. Area of equilateral triangle
3. Area of right-angled triangle
4. Area of scalene triangle

Enter your choice:>2
Enter side of triangle:>5
Area of triangle is 10.825 sq. units

*****MENU*****
1. Area of point
2. Area of equilateral triangle
3. Area of right-angled triangle
4. Area of scalene triangle

Enter your choice:>4
Enter 3 sides of triangle:>
3 4 5
Area of triangle is 6 sq. units_

*****MENU*****
1. Area of point
2. Area of equilateral triangle
3. Area of right-angled triangle
4. Area of scalene triangle

Enter your choice:>3
Enter height:>3
Enter base:>4
Area of triangle is 6 sq. units

```

```

1
2 #include<iostream.h>
3 #include<conio.h>
4 #include<stdio.h>
5
6 struct Date
7 {
8     int dd;
9     int mm;
10    int yy;
11 };
12
13 void getdate(Date &e)
14 {
15     cout<<"Enter Date:>";
16     cin>>e.dd;
17     cout<<"Enter Month:>";
18     cin>>e.mm;
19     cout<<"Enter Year:>";
20     cin>>e.yy;
21 }
22
23 void putdate(Date &e, char s='-')
24 {
25     cout<<e.dd<<s<<e.mm<<s<<e.yy;
26 }
27
28 class student
29 {
30 private:
31     char name[20];
32     int Class,rollno,admno;
33     Date DoB;
34     int marks[5],total;
35 public:
36     void cttotal();
37     void getdata(int s);
38     void putdata();
39 };
40
41 void student::cttotal()
42 {
43     total=0;
44     for(int i=0;i<5;i++)
45         total+=marks[i];
46 }
47
48 void student::getdata(int s)
49 {
50     cout<<"Enter name of student "<<s+1<<">";
51     gets(name);
52     cout<<"Enter Class:>";
53     cin>>Class;
54     cout<<"Enter Roll no:>";
55     cin>>rollno;
56     cout<<"Enter DOB:\n";
57     getdate(DoB);
58     cout<<"Enter Admission no:>";
59     cin>>admno;
60     cout<<"Enter marks in 5 subjects:>\n";
61     for(int i=0;i<5;i++)
62         cin>>marks[i];
63     cttotal();
64 }

```

```

65
66 void student::putdata()
67 {
68     cout<<name<<"\nClass- "<<Class<<"\nRoll no-
69 "<<rollno;
70     cout<<"\nAdmission number- "<<admno;
71     cout<<"\nDate of Birth:- ";
72     putdate(DoB);
73     cout<<"\n\nMarks of five subjects:- ";
74     for(int i=0;i<5;i++)
75         cout<<marks[i]<<' ';
76     cout<<"\nTotal marks- "<<total;
77     getch();
78 }
79
80 int main()
81 {
82     clrscr();
83     student s[50];
84     cout<<"Enter how many students:";
85     int n;
86     cin>>n;
87     for(int i=0;i<n;i++)
88         s[i].getdata(i);
89     for(i=0;i<n;i++)
90         s[i].putdata();
91     getch();
92     return 0;
93 }

```

Enter how many students:2

Enter name of student 1:>Ramesh
Enter Class:>12
Enter Roll no:>25
Enter DOB:
Enter Date:>13
Enter Month:>6
Enter Year:>2002
Enter Admission no:>6789
Enter marks in 5 subjects:>
56 67 65 54 70

Enter name of student 2:>Suresh
Enter Class:>12
Enter Roll no:>28
Enter DOB:
Enter Date:>21
Enter Month:>8
Enter Year:>2002
Enter Admission no:>6546
Enter marks in 5 subjects:>
56 65 64 51 49

```

1  #include<iostream.h>
2  #include<conio.h>
3
4  class Cns
5  {
6  public:
7      Cns()
8      {
9          cout<<"\n\tConstructor is executed";
10     }
11     ~Cns()
12     {
13         cout<<"\n\tDestructor is executed";
14     }
15 };
16
17 void function()
18 {
19     cout<<"\nFunction scope";
20     Cns c;
21     cout<<"\nEnd of function";
22 }
23
24 int main()
25 {
26     clrscr();
27     cout<<"\nGlobal scope";
28     Cns c3;
29     {
30         cout<<"\nBody scope";
31         Cns c1;
32         cout<<"\nEnd of body";
33     }
34     function();
35     cout<<"\nEnd of global";
36     getch();
37     return 0;
38 }

```

```

Global scope
    Constructor is executed
Body scope
    Constructor is executed
End of body
    Destructor is executed
Function scope
    Constructor is executed
End of function
    Destructor is executed
End of global

```

Ramesh
Class- 12
Roll no- 25
Admission number- 6789
Date of Birth:- 13-6-2002

Marks of five subjects:- 56 67 65 54 70
Total marks- 312

Suresh
Class- 12
Roll no- 28
Admission number- 6546
Date of Birth:- 21-8-2002

Marks of five subjects:- 56 65 64 51 49
Total marks- 285