**CLASS AND OBJECT  
[SET – 2]**

**Question 1** Write the definition for a class called Rectangle that has floating point data member length and width. The class has the following member functions:

void setlength(float) to set the length data member  
void setwidth(float) to set the width data member  
float perimeter() to calculate and return the perimeter of the rectangle  
float area() to calculate and return the area of the rectangle  
void show() to display the length and width of the rectangle  
int sameArea(Rectangle) that has one parameter of type Rectangle. sameArea returns 1 if the two Rectangles have the same area, and returns 0 if they don't.

**1.** Write the definitions for each of the above member functions.  
**2.** Write main function to create two rectangle objects. Set the length and width of   
 the first rectangle to 5 and 2.5. Set the length and width of the second rectangle   
 to 5 and 18.9. Display each rectangle and its area and perimeter.  
**3.** Check whether the two Rectangles have the same area and print a message   
 indicating the result. Set the length and width of the first rectangle to 15 and   
 6.3. Display each Rectangle and its area and perimeter again. Again, check   
 whether the two Rectangles have the same area and print a message indicating   
 the result.

**Question 2** Write the definition for a class called complex that has floating point data members for storing real and imaginary parts. The class has the following member functions:

void set(float, float) to set the specified value in object

void disp() to display complex number object

complex sum(complex) to sum two complex numbers & return complex number

1. Write the definitions for each of the above member functions.

2. Write main function to create three complex number objects. Set the value in two objects and call sum() to calculate sum and assign it in third object. Display all complex numbers.

**Question 3** Write the definition for a class called Distance that has data member feet as integer and inches as float. The class has the following member functions:

void set(int, float) to give value to object

void disp() to display distance in feet and inches

Distance add(Distance) to sum two distances & return distance

1. Write the definitions for each of the above member functions.

2. Write main function to create three Distance objects. Set the value in two objects and call add() to calculate sum and assign it in third object. Display all distances.

**Question 4** Write the definition for a class called time that has hours and minutes as integer. The class has the following member functions:

void settime(int, int) to set the specified value in object

void showtime() to display time object

time sum(time) to sum two time object & return time

1. Write the definitions for each of the above member functions.

2. Write main function to create three time objects. Set the value in two objects and call sum() to calculate sum and assign it in third object. Display all time objects.