**1.ALGORITHM:**

//Function Overloading

1. Declare a class area with ar1, ar2 and ar3 as the private

variables for area of circle, rectangle, triangle respectively.

2. In public specifier declare a function are1 with one variable

for circle area, one with three variables for traingle, one with

two variables for rectangle also declare a display function to

diaplay all areas.

3. In main function

a. Create an object of class area.

b. Ask for values of radius, length, breadth, base and

height vairables.

c. Send the parameters to the function are.

d. Call for display function.

**2.CODE WITH COMMENTS:**

#include<iostream>

using namespace std;

const float pi=3.14; //constant defined for pi

class area{

float ar1,ar2,ar3;

public :

void are(float r)

{

ar1=(pi\*r\*r);

}

void are(float n,float a,float b)

{

ar2=(n\*a\*b);

}

void are(float lr,float br)

{

ar3=(lr\*br);

}

void display()

{

cout<<"Area of circle : "<<ar1<<endl;

cout<<"Area of rectangle : "<<ar3<<endl;

cout<<"Area of triangle : "<<ar2<<endl;

}

}; //class area defined with function are with different number of arguments

int main()

{

float lr,br,c,b,r;

area a; //object instantiated of class area

cout<<"Enter the radius : "<<endl;

cin>>r;

cout<<"Enter the length and breadth :"<<endl;

cin>>lr>>br;

cout<<"Enter the height and base :"<<endl;

cin>>c>>b;

a.are(r);

a.are(0.5,c,b);

a.are(lr,br);

a.display(); //displaying answer

}

3.**SAMPLE OUTPUT AND INPUT:**

Enter the radius :

2

Enter the length and breadth :

4 5

Enter the height and base :

3 1

Area of circle : 12.56

Area of rectangle : 20

Area of triangle : 1.5

Process returned 0 (0x0) execution time : 15.280 s

Enter the radius :

3.2

Enter the length and breadth :

3 3

Enter the height and base :

2 2

Area of circle : 32.1536

Area of rectangle : 9

Area of triangle : 2

Process returned 0 (0x0) execution time : 16.189 s