**Experiment 18**

**Aim:** Write a programme to find area of rectangle, circle and square by using the concept of pure virtual function.

**code:**

#include<iostream.h>

#include <conio.h>

class Shape

{

protected:

double x,y;

public:

void set\_dim(double i,double j=0)

{

x=i; y=j;

}

virtual void show\_area()

{

cout<<"No area computation defined";

cout<<"for this class.\n"; }

};

class rectangle :public Shape

{

public:

void show\_area()

{

cout<<"Length of rectangle\t";

cout<<x<<"and width"<<y;

cout<<"has an area of";

cout<<x\*y<<"\n";

}

};

class circle :public Shape

{

public:

void show\_area()

{

cout<<"circle with radius\t";

cout<<x;

cout<<"has an area of\t";

cout<< 3.14 \*x\*x ;

}

};

class square : public Shape

{

public:

void show\_area()

{

cout<<"square with dimension";

cout<<x<<”x”;

cout<<"has an area of \t";

cout<<x\*x;

}

};

int main ()

{

clrscr();

shape \*p;

rectangle r;

circle c;

square s;

p=&r;

p->set\_dim(10.0,5.0);

p->show\_area();

p=&c;

p->set\_dim(9.0);

p->show\_area();

p=&s;

p->set\_dim(9.0);

p->show\_area();

getch();

return 0;

}