Practical-4.(i)

Aim: Write a C++ program illustrating how the constructors are implemented and the order in which they are called when the classes are inherited.Use three classes named alpha,beta,gamma such that alpha,beta are base class and gamma is derived class inheriting alpha & beta.

Algorithm:(i)Start

(ii)class S:public A1,virtual A2{….};

(iii)Print the result

(iv)Stop

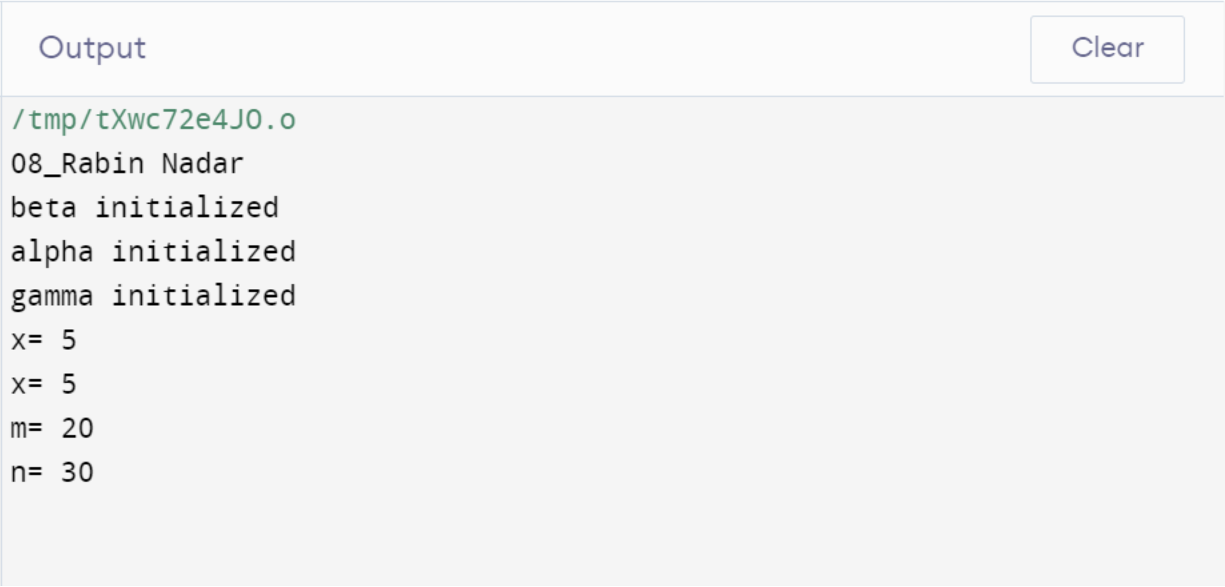
Theory: Constructor is a class member function with the same name as the class.

Program:

```
#include <iostream>
class alpha
{
    int x;
    public:
    alpha(int i)
    {
        x=i;
        std::cout<<"alpha initialized\n";
    }
    void show_x(void)
    {
        std::cout<<"x= "<<x<<"\n";
    }
};
class beta
{
    float y;
    public:
    beta(float j)
    {
        y=j;
        std::cout<<"beta initialized\n";
    }
    void show_y(void)
    {
        std::cout<<"y= "<<y<<"\n";
    }
};
    class gamma:public beta,public alpha
    {
        int m,n;
        public:
        gamma(int a,float b,int c,int d):
        alpha(a),beta(b)
        {
            m=c;n=d;
            std::cout<<"gamma initialized\n";
        }
        void show_mn(void){
            std::cout<<"m= "<<m<<"\n";
            std::cout<<"n= "<<n<<"\n";
        }
    };
    int main(){
```

```
    std::cout<<"08_Rabin Nadar"<<std::endl;

    gamma g(5, 10.75, 20, 30);

    g.show_x();

    g.show_x();

    g.show_mn();

    return 0;

 }
```

Output:



```
/tmp/tXwc72e4JO.o
08_Rabin Nadar
beta initialized
alpha initialized
gamma initialized
x= 5
x= 5
m= 20
n= 30
```

Conclusion:

Successfully written the code and executed it.