PRACTICAL 2

Name : Varsha Valecha
Class: CSE A (3rd year)
Roll: 26
Batch: A 2

Que : Write a program to solve Water Jug Problem

Code:

```
#include <bits/stdc++.h>
using namespace std;

void print(int juga,int jugb){
    cout<<"\nJug 1 : "<<juga<<"  "<<"Jug 2 : "<<jugb;
}


void pour_water(int juga, int jugb){
    int max1 =3,max2 =4,goal=4;
    print(juga, jugb);
    if (jugb==goal)  {
        return;}
    else if (jugb==max2){
            pour_water(0, juga);}
    else if (juga!=0 and jugb==0){
            pour_water(0,juga);}
    else if (juga==goal){
            pour_water(juga,0);}
    else if (juga<max1){
            pour_water(max1, jugb);}
    else if (juga<(max2-jugb)){
            pour_water(0,(juga+jugb));}
    else{
        pour_water(juga-(max2-jugb), (max2-jugb)+jugb);}

}

int main()
{
    int juga,jugb,goal,n;
    cout<<"Enter capacity of Jug 1(smaller capacity)"<< endl;
    cin>>juga;
    cout<<"Enter capacity of Jug 2(greater capacity)"<< endl;
```

```
    cin>>jugb;
    pour_water(0,0);
  return 0;
}
```

Output:

```
Enter capacity of Jug 1(smaller capacity)
3
Enter capacity of Jug 2(greater capacity)
4

Jug 1 : 0  Jug 2 : 0
Jug 1 : 3  Jug 2 : 0
Jug 1 : 0  Jug 2 : 3
Jug 1 : 3  Jug 2 : 3
Jug 1 : 2  Jug 2 : 4
Jug 1 : 0  Jug 2 : 2
PS M:\6th sem labs\AI>
```