

LAB PROGRAM 2 ADA
PROGRAM:-

```
#include <stdio.h>
#include <stdlib.h>
int a ,b ,choice;
int gcd(int a, int b)
{
    if (a == 0)
        return b;
    return gcd(b%a, a);
}
int hcf(int a, int b)
{
    while (a != b) {
        if (a > b)
            a = a - b;
        else
            b = b - a;
    }
    return a;
}
int main()
{
    for(;;){
        printf("1:iterative\n2:recursive\n3:exit\n");
        printf("Enter choice:\n");
        scanf("%d",&choice);

        switch(choice){
            case 1:
                printf("Enter 2 numbers\n");
```

```
        scanf("%d %d",&a,&b);
        printf("GCD is :%d\n", hcf(a, b));
        break;
    case 2:
        printf("Enter 2 numbers\n");
        scanf("%d %d",&a,&b);
        printf("GCD(%d, %d) = %d\n", a, b, gcd(a, b));
        break;
    default:
        exit(0);
}
}
```

OUTPUT:-

```
1:iterative
2:recursive
3:exit
Enter choice:
1
Enter 2 numbers
4
7
GCD is :1
1:iterative
2:recursive
3:exit
Enter choice:
2
Enter 2 numbers
25
60
GCD(25, 60) = 5
1:iterative
2:recursive
3:exit
Enter choice:
3
```