Experiment - 1.2

Student Name: Yash Kumar **UID: 20BCS9256**
Branch: CSE **Section/Group: 616-B**
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1. Aim/Overview of the practical:

Code implement power function in O(log n) time complexity.

2. Task to be done/ which logistics used:

Given two integers x and n, write a function to compute x^n.

3. Steps for experiment/practical/Code

Program Code:

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

intpower(intx,int n)
{
        if(n==0)
                return 1;
        if(n==1)
```

```
        return x;
    if(n%2==0)
        return power(x*x,n/2);
    else
        return x*power(x,n-1);
}
intmain()
{
    intx,n,result;
    cout<<"Enter the Value of x: ";
    cin>>x;
    cout<<"Enter the Value of n: ";
    cin>>n;
    result=power(x,n);
    cout<<x<<" raised to power of "<<n<<" is "<<result;
    return 0;
}
```

4. Result/Output/Writing Summary: