



NUST

NATIONAL UNIVERSITY
OF SCIENCES & TECHNOLOGY

Programming lab Home Task

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Section C

Q No:04

```

#include <iostream>
using namespace std;
int main() {
int decimal ,binary=0 , base =1;

cout<<"Please enter the decimal number";
cin>>decimal;
while(decimal>0)
{
binary+=(decimal%2)*base;
decimal/=2;
base*=10;

}

cout<<"The binary number is:"<<binary;
return 0;
}

```

Q.No:03

```

#include <iostream>
using namespace std;int
main(){
int n,i,j,space;

cout<<"Please enter the number of rows:";cin>>n;
for(i=1;i<=n;i++){
for(space=1;space<=n-i;space++){cout<<"

```

```

    "};
    for(j=1;j<=2*i-
    1;j++){cout<<"*";}
    cout<<endl;
}

// for lower part of the diamond
for(i=1;i>=n;i--){
    for(space=1;space<=n-i;space++){cout<<"
    "};
    for(j=1;j<=2*n-
        1;j++){cout<<"*";
    }
    cout<<endl;
}
return 0;
}

```

Q.No:02

```

#include <iostream>
using namespace std;
int main(){
    int num1,num2,commondifference,numterms;
    cout<<"Enter first number:";
    cin>>num1;

    cout<<"Enter second number:";
    cin>>num2;
}

```

```
cout<<"Enter common difference:";
cin>>commondifference; cout<<"Enter
the number of terms:";
cin>>numterms;
int sum=0;

int currentterm

for(int
    i=1;i<=numterms;i++){su
    m+=numterms;

    numterm+=common difference;

}

cout<<"The sum of AP series is:"<<sum;
endl;
}
```

Q.No:01

```
#include <iostream>
```

```
using namespace std;
```

```
int calculateHCF(int num1, int num2) {
```

```
    while (num2 != 0) {
```

```
        int temp = num2;
```

```
        num2 = num1 % num2;
```

```
        num1 = temp;} 
```

```
    return num1;}
```

```
int calculateLCM(int num1, int num2) {
```

```
    int hcf = calculateHCF(num1, num2);
```

```
    int lcm = (num1 * num2) / hcf;
```

```
    return lcm;
```

```
}
```

```
int main() {  
  
    int num1, num2;  
  
    cout << "Enter first number: ";  
  
    cin >> num1;  
  
    cout << "Enter second number: ";  
  
    cin >> num2;  
  
    // Calculate and display the LCM  
  
    cout << "LCM of " << num1 << " and " << num2 << " is: " << calculateLCM(num1,  
num2) << endl;  
  
    return 0;  
}
```
