

NAME SUMIT GUPTA
ASSIGNMENT 6

//1. Write a program to calculate sum of first N natural numbers

```
#include <stdio.h>
int main() {
    int n, i, sum = 0;

    printf("Enter a positive integer: ");
    scanf("%d", &n);
```

```
    for (i = 1; i <= n; ++i) {
        sum = sum + i;
    }
```

```
    printf("Sum = %d", sum);
    return 0;
}
```

//2. Write a program to calculate sum of first N even natural numbers

```
#include <stdio.h>
```

```
int main()
{
```

```
    int i,n,sum=0;
```

```
    printf("Input number of terms : ");
    scanf("%d",&n);
    printf("\nThe even numbers are :");
    for(i=1;i<=n;i++)
    {
        printf("%d ",2*i);
        sum=sum+2*i;
    }
    printf("\nThe Sum of even Natural Number upto %d terms : %d\n",n,sum);
    return 0;
}
```

//3. Write a program to calculate sum of first N odd natural numbers

```
#include <stdio.h>
```

```
int main()
{
```

```
    int i,n,sum=0;
```

```

printf("Input number of terms : ");
scanf("%d",&n);
for(i=1;i<=n;i++)
{
    printf("%d ",2*i-1);
    sum=sum+2*i-1;
}
printf("\nThe Sum of odd Natural Number upto %d terms : %d\n",n,sum);
return 0;
}

```

//4. Write a program to calculate sum of squares of first N natural numbers

```
#include <stdio.h>
```

```

int main()
{
    int i,n,sum=0;

```

```

printf("Input number of terms : ");
scanf("%d",&n);
for(i=1;i<=n;i++)
{
    printf("%d ",i*i);
    sum=sum+(i*i);
}
printf("\nThe Sum of square Natural Number upto %d terms : %d\n",n,sum);
return 0;
}

```

//5. Write a program to calculate sum of cubes of first N natural numbers

```
#include <stdio.h>
```

```

int main()
{
    int i,n,sum=0;

```

```

printf("Input number of terms : ");
scanf("%d",&n);
for(i=1;i<=n;i++)
{
    printf("%d ",i*i*i);
    sum=sum+ (i*i*i);
}

```

```

    }
    printf("\nThe Sum of cubes Natural Number upto %d
terms : %d \n",n,sum);
    return 0;
}

```

```

// 6. Write a program to calculate factorial of a number
#include<stdio.h>
int main ()
{
    int i=1,n,sum=0;
    printf("Enter a number\n");
    scanf("%d",&n);
    while(i<=n)
    {
        sum=sum+(i*i*i);
        i++;
    }
    printf("%d\n",sum);

    return 0;
}

```

```

//7. Write a program to count digits in a given number
#include <stdio.h>
int main() {
    long long n;
    int count = 0;
    printf("Enter an integer: ");
    scanf("%lld", &n);

    do {
        n /= 10;
        ++count;
    } while (n != 0);

    printf("Number of digits: %d", count);
}

```

```

//8. Write a program to check whether a given number is a
Prime number or
//not
#include<stdio.h>
int main ()
{
    int i,x;
    printf("enter a number \n");
    scanf("%d",&x);
}

```

```
for(i=1;i<=x-1;i++)  
  
if(x%i==0)  
break;  
if(i==x)  
{  
    printf("the given number is prime number");
```

```
}  
else  
{  
    printf("the given number is not a prime number ");  
}
```

```
}
```

```
//9. Write a program to calculate LCM of two numbers
```

```
#include <stdio.h>
```

```
int main() {
```

```
    int n1, n2, max;
```

```
    printf("Enter two positive integers: ");  
    scanf("%d %d", &n1, &n2);
```

```
    // maximum number between n1 and n2 is stored in max  
    max = (n1 > n2) ? n1 : n2;
```

```
    while (1) {  
        if ((max % n1 == 0) && (max % n2 == 0)) {  
            printf("The LCM of %d and %d is %d.", n1, n2, max);  
            break;  
        }  
        ++max;  
    }  
    return 0;  
}
```

```
//10. Write a program to reverse a given number
```

```
#include <stdio.h>
```

```
int main()
```

```
{
```

```
    int n, r = 0;
```

```
    printf("Enter a number to reverse\n");  
    scanf("%d", &n);
```

```
while (n != 0)
{
    r = r * 10;
    r = r + n%10;
    n = n/10;
}
```

```
printf("Reverse of the number = %d\n", r);
```

```
return 0;
}
```