

Assignment-9

Code:

```
// Q31. Write your own sqrt function in C.
#include <stdio.h>
#include <math.h>
int main()
{
    int n;
    printf("Enter Number: ");
    scanf("%d",&n);
    printf("The Root of %d is %.3f.\n",n,pow(n,0.5));
}
```

Output:

```
Enter Number: 81
The Root of 81 is 9.000.
```

Code:

```
// Q33. How can we sum the digits of a given number in single statement.
#include <stdio.h>
int main()
{
    int a,s=0;
    printf("Enter Number: ");
    scanf("%d",&a);
    int n=a;
    for(; n>0; s+=n%10, n/=10);
    printf("The sum of digits of number %d is %d.\n",a,s);
    return 0;
}
```

Output:

```
Enter Number: 956
The sum of digits of number 956 is 20.
```

Code:

```
// Q35. Write a C program generate permutations.
#include <stdio.h>
int factorial(int n)
{
    int f=1;
    for (int i=n;i>=2;i--)
        f=f*i;
}
int main()
{
    int n,r;
    printf("Enter the value of 'n' and 'r' nPr: ");
    scanf("%d %d",&n,&r);
    printf("nPr for %dP%d is %d.",n,r,factorial(n)/factorial(n-r));
}
```

Output:

```
Enter the value of 'n' and 'r' nPr: 6
3
nPr for 6P3 is 120.
```