

Q.N.1. Write a program in C to print all the prime numbers between 1 and 100.

Solution: C Program to Print Prime Numbers from 1 to 100 using While Loop:

```
#include <stdio.h>

void main()

{

    int i, Number = 1, count;

    printf(" Prime Number from 1 to 100 are: \n");

    while(Number <= 100)

    {

        count = 0;

        i = 2;

        while(i <= Number/2)

        {

            if(Number%i == 0)

            {

                count++;

                break; }

            i++;

        }

        if(count == 0 && Number != 1 )

        {
```

```
        printf(" %d ", Number);  
  
    }  
  
    Number++;  
  
}  
  
}
```

Output: Prime Number from 1 to 100 are: 2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 59 61 67
71 73 79 83 89 97

Q.N. 2 Write a program in C to generate following pattern:

```
1  
23  
456  
78910
```

Solution:

```
#include<stdio.h>  
  
void main ()  
{  
  
    int row, i, j, num= 1;  
  
    printf("Enter number of rows:");  
    scanf("%d", &row);  
  
    for (i=1; i<=row; i++)
```

```
{  
  
for (j=1; j<=i; ++j)  
{  
  
printf("%d ", num);  
  
num++;  
  
}printf("\n");  
}  
}
```

OUTPUT:

Enter number of rows:4

1

2 3

4 5 6

7 8 9 10

Q.N.3 Write a menu driven program using switch case to calculate

- Area of circle
- Area of sphere

SOLLUTION:

```
#include <stdio.h>
void main ()
{
    int choice;

    float area,rad;

    printf("Input 1 for area of circle\n");
    printf("Input 2 for area of sphere\n");
    printf("enter your choice to proceed : ");
    scanf("%d",&choice);

    switch(choice)

        { case 1:

                printf("Input radius of the circle : ");
                scanf("%d",&r);

                area=3.14*rad*rad;
```

```
        break;

    case 2:

        printf("Input radius of the sphere : ");
        scanf("%d",&r); area=4*3.14*rad*rad;

        break;

    }

    printf("The area is : %f \n",area);

}
```

OUTPUT:

Input 1 for area of circle

Input 2 for area of sphere

Input your choice : 2

Input radius of the sphere : 5

The area is : 314.000

Q.N.4 Some text file is given; create another text file replacing the following words

“Ram” to “Hari”, “Sita” to “Gita”, and “Govinda” to “Shiva”.

SOLLUTION:

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

```
#include<string.h>
```

```
int main()
```

```
{
```

```
    FILE *fp,*fpp;
```

```
    char c[15];
```

```
    fp=fopen("file.txt","r");
```

```
    if(fp==NULL)
```

```
    {
```

```
        printf("Cannot open file with name file.txt");
```

```
        exit(1);
```

```
    }
```

```
    fpp=fopen("new-file.txt","w");
```

```
    if(fpp==NULL)
```

```
    {
```

```
        printf("Cannot create file with name new-file.txt");
```

```
        exit(1);
```

```
    }

    while(fscanf(fp,"%s",c)!=EOF)

    {

        if(strcmp(c, "Ram")==0)

            fprintf(fpp, "Hari ",c);

        else if(strcmp(c, "Sita")==0)

            fprintf(fpp,"Gita",c);

        else if(strcmp(c, "Govinda")==0)

            fprintf(fpp, "Shiva",c);

        else fprintf(fpp,"%s ",c);

    }

    printf("Completed!");

    fclose(fp);

    fclose(fpp);

    return 0;

}
```

OUTPUT: As I don't have file so it ends on first loop.

and outputs as: Cannot open file with name file.txt

SOLLUTION:

B. Define a Structure Employee having data members name, address and salary. Take data for n employee in an array dynamically and find the average salary.

SOLLUTION:

```
#include<stdio.h>

#define n 3

void main()

{

    struct employee

    {

        char name[20];

        char address[20];

        float salary;

    } s[n];

    int i;
```



```
float avgSalary,sum=0;

//Loop to read data for n employee

for(i=0;i<n;i++)

{

    printf("\nEnter details of employee %d\n",i+1);

    printf("Enter name:");

    fgets(s[i].name,20,stdin);

    printf("Enter salary:");

    scanf("%f",&s[i].salary);

    fflush(stdin);

    printf("Enter address:");

    fgets(s[i].address,20,stdin);

}

//Loop to find the sum of salary of all employees

for(i=0;i<n;i++)

{

    sum=sum+s[i].salary;

}

avgSalary=sum/n;

printf("Average salary of employee: %f",avgSalary);

}
```

OUTPUT:

Enter details of employee 1

Enter name:ram

Enter salary:5000

Enter address:ktm

Enter details of employee 2

Enter name:shyam

Enter salary:9000

Enter address:pokhara

Enter details of employee 3

Enter name:hari

Enter salary:7000

Enter address:dhading

Average salary of employee: 7000.000