

# Assignment – 2

**1. Write a program to print unit digit of a given number?**

ans :-

```
#include<stdio.h>

int main()
{
    int num,uin;
    printf("Enter a number:");
    scanf("%d",&num);
    uin=num%10;
    printf("the unit number is %d",uin);
    return 0;
}
```



**2. Write a program to print a given number without its last digit?**

```
#include<stdio.h>

int main()
{
    int num,g;
    printf("Enter a number :");
    scanf("%d",&num);
    g=num/10;
    printf("the output of given number is:%d",g);
    return 0;
}
```

3. Write a program to swap values of two int variables?

```
#include<stdio.h>

int main(){
    int fir,sec,thir;
    printf("Enter the first number:\n");
    scanf("%d",&fir);
    printf("Enter the second number : \n");
    scanf("%d",&sec);
    printf("Number before swaping:1st num:-%d 2nd num:-%d\n",fir,sec);
    thir=fir;
    fir=sec;
    sec=thir;
    printf("Number after swaping:1st num:-%d 2nd num:-%d\n",fir,sec);
    return 0;
}
```

> OUTLINE

4. Write a program to swap values of two int variables without using a third variable?

```
#include<stdio.h>

int main(){
    int fir,sec;
    printf("Enter the first number:\n");
    scanf("%d",&fir);
    printf("Enter the second number : \n");
    scanf("%d",&sec);

    printf("Number before swaping:1st num:-%d 2nd num:-%d\n",fir,sec);
    fir=(fir+sec);
    sec=(fir-sec);
```

```
fir=(fir-sec);  
printf("Number after swaping:1st num:-%d 2nd num:-%d\n",fir,sec);  
    return 0;  
}
```

**5. Write a program to input a three-digit number and display the sum of the digits?**

```
#include<stdio.h>  
int main(){  
    int a,b,c;  
    printf("Enter the first number:\n");  
    scanf("%d",&a);  
    printf(" Enter the second number :\n");  
    scanf("%d",&b);  
    printf(" Enter the third number :\n");  
    scanf("%d",&c);  
    printf("sum of all three number is %d",a+b+c);  
    return 0;  
}
```

```
1 #include<stdio.h>
2 int main(){
3     int a,b,c;
4     printf("Enter the first number:\n");
5     scanf("%d",&a);
6     printf(" Enter the second number :\n");
7     scanf("%d",&b);
8     printf(" Enter the third number :\n");
9     scanf("%d",&c);
10    printf("sum of all three number is %d",a+b+c);
11    return 0;
12 }
```

PS E:\c problems> cd "e:\c problems\" ; if (\$?) { gcc sum\_3digit.c -o sum\_3digit } ; if (\$?) { .\sum\_3digit }

Enter the first number:  
5  
Enter the second number :  
20  
Enter the third number :  
30  
sum of all three number is 55  
PS E:\c problems> S

6. Write a program which takes a character as an input and displays its ASCII code?

```
#include<stdio.h>

int main(){

    char k;

    int j;

    printf("Enter a character:");

    scanf("%c",&k);

    j=k;

    printf("%d",j);

}
```

7. Write a program to find the position of first 1 in LSB?

**Ans:**

```
#include<stdio.h>

int main(){
    int x,count=0,res=0;
    printf("Enter a number:");
    scanf("%d",&x);
    /*while (x!=0)
    {
        res=x&1;
        i++;
        if (res==1)
        {
            printf("%d",count);
            break;
        }
        x=x>>1;
    }*/
    for ( int i = 0; i <=count ; i++)
    {
        res=x&1;
        count++;
        if (res==1)
        {
            printf("%d",count);
            break;
        }
        x=x>>1;
    }
}
```

```
1 #include<stdio.h>
2 int main(){
3     int x,count=0,res=0;
4     printf("Enter a number:");
5     scanf("%d",&x);
6     /*while (x!=0)
7     {
8         res=x&1;
9         i++;
10        if (res==1)
11        {
12            printf("%d",count);
13            break;
14        }
15        x=x>>1;
16    }*/
17    for ( int i = 0; i <=count ; i++)
18    {
19        res=x&1;
20        count++;
21        if (res==1)
22        {
23            printf("%d",count);
24            break;
25        }
26        x=x>>1;
27    }
28 }
```

**8. Write a program to check whether the given number is even or odd using a bitwise**

**Operator?**

**Ans:**

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

```
int main(){
```

```
    int x,res;
```

```
    printf("Enter a number:");
```

```
    scanf("%d",&x);
```

```
    res=x&1;
```

```
    if (res==1)
```

```
{
```

```

        printf("odd");
    }
    else{
        printf("even");
    }
    return 0;
}

```

The screenshot shows a VS Code editor with a C file named `bitwise_even.c` open. The code is as follows:

```

1  #include<stdio.h>
2  int main(){
3      int x,res;
4      printf("Enter a number:");
5      scanf("%d",&x);
6      res=x&1;
7      if (res==1)
8      {
9          printf("odd");
10     }
11     else{
12         printf("even");
13     }
14     return 0;
15 }

```

Below the editor, the TERMINAL window shows the following commands and output:

```

PS E:\c problems> cd "e:\c problems\" ; if ($?) { gcc bitwise_even.c -o bitwise_even } ; if ($?) { .\bitwise.exe }
Enter a number:5
odd
PS E:\c problems> cd "e:\c problems\" ; if ($?) { gcc bitwise_even.c -o bitwise_even } ; if ($?) { .\bitwise.exe }
Enter a number:8
even
PS E:\c problems> cd "e:\c problems\" ; if ($?) { gcc bitwise.c -o bitwise } ; if ($?) { .\bitwise.exe }
Enter a number:4

```

**9. Write a program to print size of an int, a float, a char and a double type variable?**

**Ans:**

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

```
int main(){
```

```
    int x;
```

```
    float y;
```

```

    char z;

    double w;

printf("size of int %d\n",sizeof x);

printf("size of float %d\n",sizeof y);

printf("size of char %d\n",sizeof z);

printf("size of double %d\n",sizeof w);

}

```

The screenshot shows the Visual Studio Code editor with a C program named `sizeof.c` open. The program's code is as follows:

```

1  #include<stdio.h>
2  int main(){
3      int x;
4      float y;
5      char z;
6      double w;
7      printf("size of int %d\n",sizeof x);
8      printf("size of float %d\n",sizeof y);
9      printf("size of char %d\n",sizeof z);
10     printf("size of double %d\n",sizeof w);
11 }

```

The Explorer sidebar on the left shows a list of files in the `problems` directory, including `sizeof.c`. The Terminal at the bottom shows the command to compile and run the program:

```

PS E:\c problems> cd "e:\c problems\" ; if ($?) { gcc sizeof.c -o sizeof } ; if ($?) { .\sizeof }
size of int 4
size of float 4
size of char 1
size of double 8
PS E:\c problems>

```

**10. Write a program to make the last digit of a number stored in a variable as zero?**

**Ans:**

```

#include<stdio.h>

int main(){

int n=2345;

printf("Num=%d\n",n);

n=n/10;

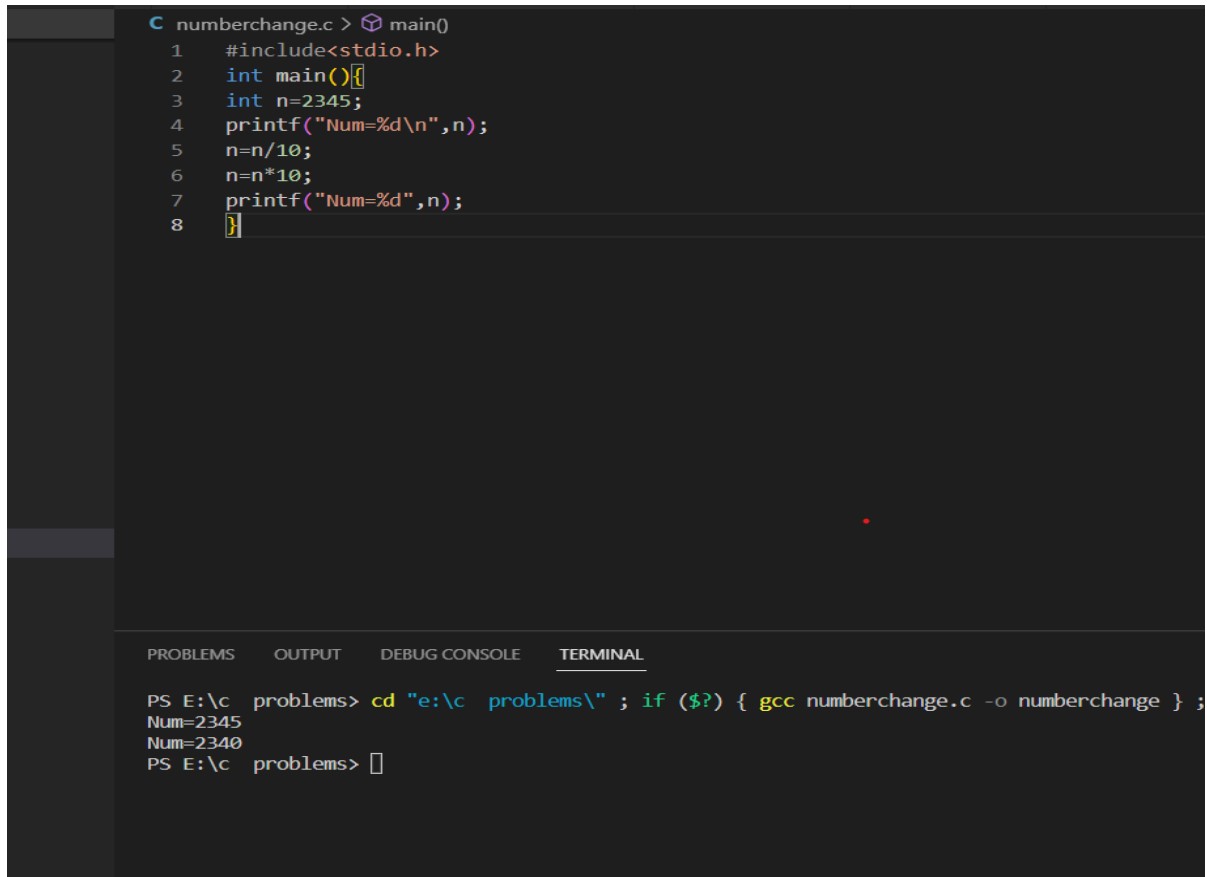
```



```
n=n*10;

printf("Num=%d",n);

}
```

The image shows a code editor with a C program named 'numberchange.c'. The program's logic is to take an initial value of 2345, print it, divide it by 10 to get 234, and then multiply it by 10 to get 2340, printing the final result. Below the code editor, a terminal window shows the command to compile the program using 'gcc' and the resulting output, which matches the program's logic: 'Num=2345' followed by 'Num=2340'.

```
C numberchange.c > main()
1  #include<stdio.h>
2  int main(){
3  int n=2345;
4  printf("Num=%d\n",n);
5  n=n/10;
6  n=n*10;
7  printf("Num=%d",n);
8  }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
PS E:\c problems> cd "e:\c problems\" ; if ($?) { gcc numberchange.c -o numberchange } ;
Num=2345
Num=2340
PS E:\c problems> 
```

**11. Write a program to input a number from the user and also input a digit. Append a digit in the number and print the resulting number. (Example - number=234 and digit=9 then the resulting number is 2349)?**

**Ans:**

```
#include<stdio.h>

int main(){

    int num,dig;

    printf("Enter a number:");
```

```
scanf("%d",&num);
printf("Enter a digit:");
scanf("%d",&dig);
num=num*10;
num=num+dig;
printf("the change number is:%d",num);
}
```

**12. Assume price of 1 USD is INR 76.23. Write a program to take the amount in INR and convert it into USD.**

**Ans:**

```
#include<stdio.h>
int main(){
float value=76.23,inr;

printf("Enter a amount in inr:");
scanf("%f",&inr);
inr=inr/value;
printf("usd amount is :%f",inr);
}
```

```
inr_to_usd.c > main()
1 //12. Assume price of 1 USD is INR 76.23. Write a program to take the amount in INR and
2 //convert it into USD.
3 #include<stdio.h>
4 int main(){
5 float value=76.23,inr;
6
7 printf("Enter a amount in inr:");
8 scanf("%f",&inr);
9 inr=inr/value;
10 printf("usd amount is :%f",inr);
11 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
PS E:\c problems> cd "e:\c problems\" ; if ($?) { gcc inr_to_usd.c -o inr_to_usd } ; if ($?) { .\inr_to_usd.exe }
Enter a amount in inr:76.23
usd amount is :1.000000
PS E:\c problems> 
```

**13. Write a program to take a three-digit number from the user and rotate its digits by one position towards the right.**

**Ans:**

```
#include<stdio.h>

int main(){

int n;

printf("Enter a number :");

scanf("%d",&n);

n=n%10*100+n/10;

printf("%d",n);

}
```