```c
/*                    Name: PRINCE MAURYA
        Roll no.:21D80005        Mobile no.:9453122989    */
#include<stdio.h>
int main(){
    int decimalnum;
    printf("Enter decimal number : ");
    scanf("%d",&decimalnum);
    int i,p;
    int N[10];
    for(i=0;decimalnum>0;i++){
        N[i] = decimalnum%2;
        decimalnum=decimalnum/2;
    }
    printf("Equivalent binary number is : ");
    for(i=i-1;i>=0;i--){
        printf("%d",N[i]);
    }

    return 0;
}
```

PS C:\Users\princ\OneDrive - NIT Durgapur\CSC01\C
SS 51 LAB\Assi 4> cd "c:\Users\princ\OneDrive - N
IT Durgapur\CSC01\CSS 51 LAB\Assi 4\" ; if ($?) {
 gcc a1.c -o a1 } ; if ($?) { .\a1 }
Enter decimal number : 32
Equivalent binary number is : 100000
PS C:\Users\princ\OneDrive - NIT Durgapur\CSC01\C
SS 51 LAB\Assi 4>

```c
/*                      Name: PRINCE MAURYA
        |       Roll no.:21D80005        Mobile no.:9453122989    */
#include<stdio.h>
int main(){
    int binval, decval=0, base = 1, rem;
    printf("Enter the binary number: ");
    scanf("%d", &binval);
    while (binval != 0){
        rem = binval % 10;
        decval = decval + rem * base;
        base = base * 2;
        binval = binval / 10;
    }
    //printf("Equivalent hexadecimal value: %x", decval);
    int rmdr,i=0,j;
    char N[20];
    while(decval!=0){
        rmdr=decval%16;
        if(rmdr<10){
            rmdr=rmdr+48;
        }
        else{
            rmdr=rmdr+55;
        }
        N[i]=rmdr;
        i++;
        decval=decval/16;
    }
    printf("Equivalent hexadecimal value:");
    for(j=i-1;j>=0;j--){
        printf("%c",N[j]);
    }
    return 0;
}
```

Terminal:

```
SS 51 LAB\Assi 4>
            > cd "c:\Users\princ\OneDrive - N
IT Durgapur\CSC01\CSS 51 LAB\Assi 4\" ; if ($?) {
 gcc a2.c -o a2 } ; if ($?) { .\a2 }
Enter the binary number: 1011010
Equivalent hexadecimal value:5A
PS C:\Users\princ\OneDrive - NIT Durgapur\CSC01\C
SS 51 LAB\Assi 4>
```
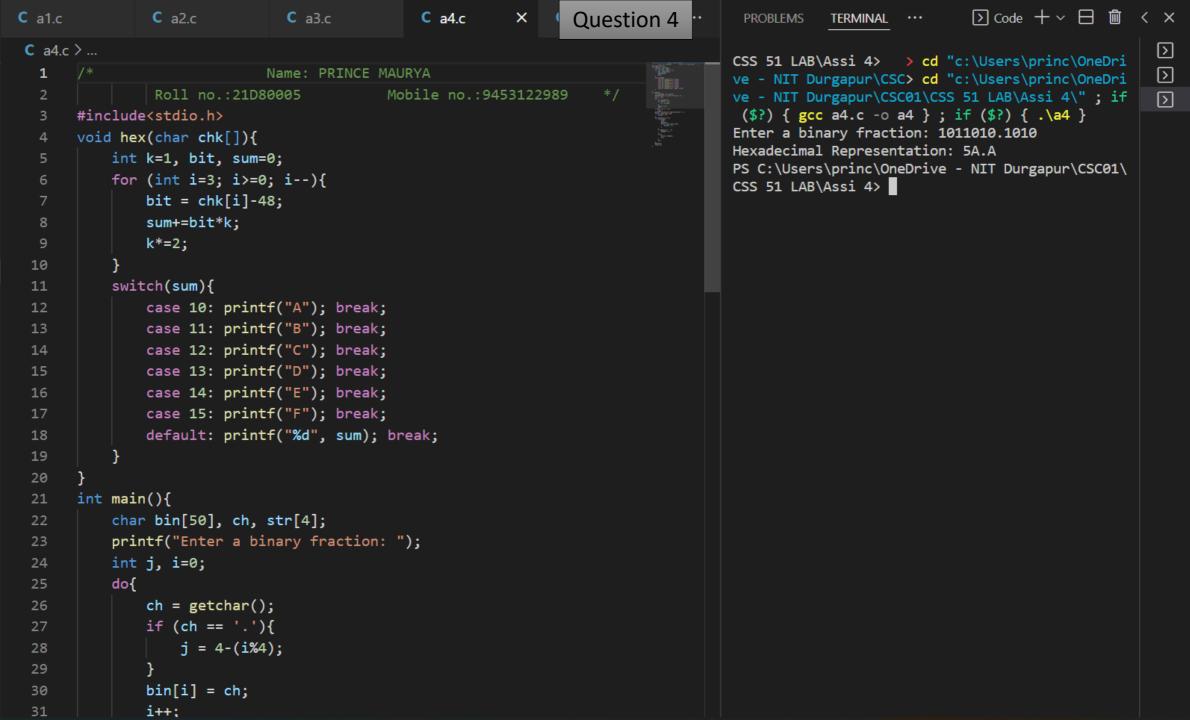
```c
/*                    Name: PRINCE MAURYA
            Roll no.:21D80005        Mobile no.:9453122989*/
#include<stdio.h>
int main(){
    char oct[100];
    int i=0;
    printf("Enter octal fraction number : ");
    scanf("%s",oct);
    printf("Equivalent binary fraction number is : ");
    while(oct[i]){

        switch(oct[i])
        {
            case '.':
            printf(".");break;
            case '0':printf("000");break;
            case '1':printf("001");break;
            case '2':printf("010");break;
            case '3':printf("011");break;
            case '4':printf("100");break;
            case '5':printf("101");break;
            case '6':printf("110");break;
            case '7':printf("111");break;
            default:printf("\n Invalid entered %c",oct[i]);
        }
        i++;
    }
    return 0;
}
```

Terminal output:

```
B\Assi 4>
        > cd "c:\Users\princ\OneDrive - NIT Durgapur\CSC0
1\CSS 51 LAB\Assi 4\" ; if ($?) { gcc a3.c -o a3 } ; if (
$?) { .\a3 }
Enter octal fraction number : 3.2
Equivalent binary fraction number is : 011.010
PS C:\Users\princ\OneDrive - NIT Durgapur\CSC01\CSS 51 LA
B\Assi 4>
```

C a4.c > …

```c
 1  /*                Name: PRINCE MAURYA
 2              Roll no.:21D80005        Mobile no.:9453122989       */
 3  #include<stdio.h>
 4  void hex(char chk[]){
 5      int k=1, bit, sum=0;
 6      for (int i=3; i>=0; i--){
 7          bit = chk[i]-48;
 8          sum+=bit*k;
 9          k*=2;
10      }
11      switch(sum){
12          case 10: printf("A"); break;
13          case 11: printf("B"); break;
14          case 12: printf("C"); break;
15          case 13: printf("D"); break;
16          case 14: printf("E"); break;
17          case 15: printf("F"); break;
18          default: printf("%d", sum); break;
19      }
20  }
21  int main(){
22      char bin[50], ch, str[4];
23      printf("Enter a binary fraction: ");
24      int j, i=0;
25      do{
26          ch = getchar();
27          if (ch == '.'){
28              j = 4-(i%4);
29          }
30          bin[i] = ch;
31          i++;
```

```
CSS 51 LAB\Assi 4>  > cd "c:\Users\princ\OneDri
ve - NIT Durgapur\CSC> cd "c:\Users\princ\OneDri
ve - NIT Durgapur\CSC01\CSS 51 LAB\Assi 4\" ; if
 ($?) { gcc a4.c -o a4 } ; if ($?) { .\a4 }
Enter a binary fraction: 1011010.1010
Hexadecimal Representation: 5A.A
PS C:\Users\princ\OneDrive - NIT Durgapur\CSC01\
CSS 51 LAB\Assi 4>
```

```c
    } while (ch != '\n');
        i=0;
    printf("Hexadecimal Representation: ");
    for(int k=0; k<4; k++){
        str[k] = '0';
    }
    while(bin[i]!='\n'){
        if (j==4){
            j=-0;
            hex(str);
            for(int k=0; k<4; k++){
                str[k] = '0';
            }
        }
        if (bin[i] == '.'){
            printf(".");
        }
        else{
            str[j] = bin[i];
            j++;
        }
        i++;
    }
    hex(str);
    return 0;
}
```