LAB 11 (FUNCTIONS)
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```
//q1)Print the reverse of a positive integer.
#include <stdio.h>
void printReverse(int n){
   int rev=0;
   while(n>0){
      rev=rev * 10 + n % 10;
      n /= 10;
   }
   printf("%d\n", rev);
}
int main() {
   int num;
   printf("Enter a positive integer: ");
   scanf("%d",&num);
   printf("The reverse of %d is: ", num);
   printReverse(num);
   return 0;
}
```

Output-

```
Enter a positive integer: 82914
The reverse of 82914 is: 41928
```

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```
//q2)Convert a decimal number to binary and vice versa.
#include <stdio.h>
void decToBin(int n) {
   if (n == 0) {
      return;
   } else {
      decToBin(n/2);
      printf("%d",n%2);
   }
}
int binToDec(int n) {
   int decimal = 0,base = 1;
   while (n > 0) {
      decimal += (n%10)*base;
      n/=10;
      base*=2;
   }
   return decimal;
}

int main() {
   int num, choice;
   printf("Enter a number: ");
   scanf("%d", &num);
   printf("Enter your choice:\n");
   printf("1. Convert decimal to binary\n");
   printf("2. Convert binary to decimal\n");
   scanf("%d", &choice);
   switch (choice) {
```

```
        case 1:
            printf("Binary equivalent of %d is: ", num);
            decToBin(num);
            break;
        case 2:
            printf("Decimal equivalent of %d is: %d\n", num, binToDec(num));
            break;
        default:
            printf("Invalid choice\n");
            break;
    }
    return 0;
}
```

Output 1-

Enter a number: 84

Enter your choice:

1. Convert decimal to binary

2. Convert binary to decimal

1

Binary equivalent of 84 is: 1010100

Output 2-

Enter a number: 1011

Enter your choice:

1. Convert decimal to binary

2. Convert binary to decimal

2

Decimal equivalent of 1011 is: 11

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```
//q3)Find out the prime factors of a number.
#include <stdio.h>
void primeFactors(int n) {
   int i = 2;
   while (i <= n) {
      if (n % i == 0) {
         printf("%d ", i);
         n /= i;
      } else {
         i++;
      }
   }
}
int main() {
   int num;
   printf("Enter a positive integer: ");
   scanf("%d", &num);
   printf("Prime factors of %d are: ", num);
   primeFactors(num);
   return 0;
}
```

Output-

```
Enter a positive integer: 60
Prime factors of 60 are: 2 2 3 5
```

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```
//q4)Find out the LCM and HCF of two numbers.
#include <stdio.h>


int gcd(int a, int b) {
   if (b == 0) {
      return a;
   }
   return gcd(b, a % b);
}
int lcm(int a, int b) {
   int hcf = gcd(a, b);
   return (a * b) / hcf;
}
int main() {
   int num1, num2, hcf, lcm_value;
   printf("Enter two positive integers: ");
   scanf("%d %d", &num1, &num2);
   hcf = gcd(num1, num2);
   lcm_value = lcm(num1, num2);
   printf("HCF of %d and %d is %d\n", num1, num2, hcf);
   printf("LCM of %d and %d is %d\n", num1, num2, lcm_value);
   return 0;
}
```

Output-

```
Enter two positive integers: 15 72
HCF of 15 and 72 is 3
LCM of 15 and 72 is 360
```

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