

```

1 1/*
2 2 * Ex_1.c
3 3 * Created on: Aug 1, 2021
4 4 * Author : Sarah
5 5 */
6 6
7 7 #include <stdio.h>
8 8
9 9 int isPrime(int num);
10 10
11 11 int main(){
12 12     setvbuf(stdout, NULL, _IONBF, 0);
13 13     setvbuf(stderr, NULL, _IONBF, 0);
14 14     int a, b;
15 15     printf("Enter two numbers(intervals): ");
16 16     scanf("%d %d", &a, &b);
17 17     printf("Prime numbers between %d and %d: ", a, b);
18 18     for(int i = a; i <= b; i++){
19 19         switch(isPrime(i)){
20 20             case 1:
21 21                 printf("%d ", i);
22 22                 break;
23 23             case 0:
24 24                 break;
25 25         }
26 26     }
27 27     return 0;
28 28 }
29 29 int isPrime(int num){
30 30     if (num == 0 || num == 1) {
31 31         return 0;
32 32     }
33 33     else {
34 34         for (int j = 2; j <= num / 2; j++) {
35 35             if (num % j == 0) {
36 36                 return 0;
37 37                 break;
38 38             }
39 39         }
40 40     }
41 41     return 1;
42 42 }
43 43

```

```

<terminated> (exit value: 0) Ex_1.exe [C/C++ Application] E:\Online Dip
Enter two numbers(intervals): 10 30
Prime numbers between 10 and 30: 11 13 17 19 23 29

```

```
Ex_2.c Ex_3.c Ex_4.c Console
1 /*
2  * Ex_2.c
3  * Created on: Aug 1, 2021
4  * Author : Sarah
5  */
6
7 #include <stdio.h>
8
9 int fact(int num);
10
11 int main(){
12     setvbuf(stdout, NULL, _IONBF, 0);
13     setvbuf(stderr, NULL, _IONBF, 0);
14     int number;
15     printf("Enter a positive integer: ");
16     scanf("%d", &number);
17
18     printf("Factorial of %d = %d", number, fact(number));
19     return 0;
20 }
21 int fact(int num){
22     if(num == 0 || num == 1){
23         return 1;
24     }
25     else{
26         return num * fact(num - 1);
27     }
28 }
29
```

<terminated> (exit value: 0) Ex_2.exe [C/C++ Application]
Enter a positive integer: 6
Factorial of 6 = 720

```
Ex_3.c Ex_4.c Console
1 /*
2  * Ex_3.c
3  * Created on: Aug 1, 2021
4  * Author : Sarah
5  */
6
7 #include <stdio.h>
8 void reverse(char *str);
9 int main(){
10     setvbuf(stdout, NULL, _IONBF, 0);
11     setvbuf(stderr, NULL, _IONBF, 0);
12     char string[100];
13     printf("Enter a sentence: ");
14     gets(string);
15     reverse(string);
16     return 0;
17 }
18
19 void reverse(char *str){
20     if (*str){
21         reverse(str+1);
22         printf("%c", *str);
23     }
24 }
25
```

<terminated> (exit value: 0) Ex_3.exe [C/C++ Application]
Enter a sentence: margorp emosewa
awesome program

Ex_4.c

```
1 /*
2  * Ex_4.c
3  * Created on: Aug 1, 2021
4  * Author : Sarah
5  */
6
7 #include <stdio.h>
8
9 int power(int a, int b);
10
11 int main(){
12     setvbuf(stdout, NULL, _IONBF, 0);
13     setvbuf(stderr, NULL, _IONBF, 0);
14     int base, pow;
15     printf("Enter base number: ");
16     scanf("%d", &base);
17     printf("Enter power number(positive integer): ");
18     scanf("%d", &pow);
19     printf("%d^%d = %d", base, pow, power(base, pow));
20     return 0;
21 }
22
23 int power(int a, int b) {
24     if (b != 0)
25         return (a * power(a, b - 1));
26     else
27         return 1;
28 }
29
```

Console

```
<terminated> (exit value: 0) Ex_4.exe [C/C++ Application]
Enter base number: 3
Enter power number(positive integer): 3
3^3 = 27
```