main.c

Share Run

```c
#include <stdio.h>
#include <stdlib.h>
#include <time.h>
#include <math.h>

int swapFirstLast(int n) {
    if (n < 10) return n;
    int d = log10(n);
    int f = n / (int)pow(10, d), l = n % 10;
    int m = (n % (int)pow(10, d)) / 10;
    return l * (int)pow(10, d) + m * 10 + f;
}

int main() {
    srand(time(0));
    for (int i = 0; i < 5; i++) {
        int num = rand() % 99990 + 10; // random 2-99999
        printf("%d -> %d\n", num, swapFirstLast(num));
    }
    return 0;
}
```

Output

Clear

```
67026 -> 67026
76836 -> 66837
32618 -> 82613
42833 -> 32834
64778 -> 84776


=== Code Execution Successful ===
```

main.c

Share Run

```c
#include <stdio.h>
#include <stdlib.h>
#include <time.h>

int main() {
    int num, sum = 0;

    srand(time(0));
    num = rand() % 1000 + 1;

    for (int i = 1; i <= num / 2; i++)
        if (num % i == 0) sum += i;

    printf("Random number: %d\n", num);
    if (sum == num) printf("Perfect Number\n");
    else printf("Not a Perfect Number\n");

    return 0;
}
```

Output

Clear

```
Random number: 173
Not a Perfect Number


=== Code Execution Successful ===
```

main.c

Share Run

```c
#include <stdlib.h>
#include <time.h>

int main() {
    int num, temp, sum = 0, digit, fact, i;

    srand(time(0));              // seed random generator
    num = rand() % 1000 + 1;     // random number between 1 and 1000
    printf("Random number: %d\n", num);

    temp = num;
    while (temp > 0) {
        digit = temp % 10;
        fact = 1;
        for (i = 1; i <= digit; i++) fact *= i; // factorial of digit
        sum += fact;
        temp /= 10;
    }

    if (sum == num) printf("%d is a Strong Number\n", num);
    else printf("%d is NOT a Strong Number\n", num);

    return 0;
}
```

Output Clear

```
Random number: 661
661 is NOT a Strong Number


=== Code Execution Successful ===
```

main.c

Share Run

```c
#include <stdio.h>
#include <stdlib.h>
#include <time.h>

int main() {
    int n, i;
    double sum = 0.0;

    srand(time(0));       // seed random generator
    n = rand() % 10 + 2;  // pick random terms between 2 and 11
    printf("Number of terms: %d\n", n);

    for (i = 1; i <= n; i++) {
        sum += (double)(2 * i - 1) / (2 * i);  // series term
    }

    printf("Sum of series up to %d terms = %.4lf\n", n, sum);
    return 0;
}
```

Output Clear

```
Number of terms: 2
Sum of series up to 2 terms = 1.2500


=== Code Execution Successful ===
```

main.c

Share Run

```c
#include <stdio.h>
#include <stdlib.h>
#include <time.h>

int main() {
    int n, i;
    double sum = 0.0;

    srand(time(0));          // seed random generator
    n = rand() % 10 + 2;     // pick random terms between 2 and 11
    printf("Number of terms: %d\n", n);

    for (i = 1; i <= n; i++) {
        sum += (double)(2 * i) / (4 * i - 1);
    }

    printf("Sum of series up to %d terms = %.4lf\n", n, sum);
    return 0;
}
```

Output Clear

```
Number of terms: 11
Sum of series up to 11 terms = 5.9383


=== Code Execution Successful ===
```

main.c

Share Run

```c
#include <stdio.h>

int main() {
    int i, j;

    for (i = 1; i <= 5; i++) {        // 5 rows
        for (j = 1; j <= 5; j++) {    // 5 stars in each row
            printf("*");
        }
        printf("\n"); // move to next line
    }

    return 0;
}
```

Output Clear

```
*****
*****
*****
*****
*****


=== Code Execution Successful ===
```

main.c

Share Run

```c
#include <stdio.h>

int main() {
    int i, j;

    for (i = 1; i <= 5; i++) {        // 5 rows
        for (j = 1; j <= i; j++) {    // stars equal to row number
            printf("*");
        }
        printf("\n");  // move to next line
    }

    return 0;
}
```

Output Clear

```
*
**
***
****
*****


=== Code Execution Successful ===
```

main.c

Share Run

Output Clear

```c
#include <stdio.h>

int main() {
    int i, j;

    for (i = 1; i <= 5; i++) {        // 5 rows
        for (j = 1; j <= i; j++) {    // print numbers up to 'i'
            printf("%d", j);
        }
        printf("\n");  // move to new line after each row
    }

    return 0;
}
```

```
1
12
123
1234
12345


=== Code Execution Successful ===
```

main.c

Share Run

```c
#include <stdio.h>

int main() {
    int i, j;

    for (i = 1; i <= 5; i++) {   // rows
        for (j = 6 - i; j <= 5; j++) {  // numbers in row
            printf("%d", j);
        }
        printf("\n");  // next line
    }

    return 0;
}
```

Output Clear

```
5
45
345
2345
12345


=== Code Execution Successful ===
```

main.c

Share Run

```c
#include <stdio.h>

int main() {
    int i, j;

    for (i = 1; i <= 5; i++) {          // rows
        for (j = 1; j < i; j++)         // print spaces
            printf(" ");
        for (j = 5; j >= i; j--)        // print stars
            printf("*");
        printf("\n");
    }

    return 0;
}
```

Output Clear

```
*****
 ****
  ***
   **
    *


=== Code Execution Successful ===
```