

Explorer

- main.c

```
1 #include <stdio.h>
2 int kadane(int arr[], int n) {
3     int max_so_far = 0, max_ending_here = 0;
4     for (int i = 0; i < n; i++) {
5         max_ending_here = max_ending_here + arr[i];
6         if (max_ending_here < 0)
7             max_ending_here = 0;
8         if (max_so_far < max_ending_here)
9             max_so_far = max_ending_here;
10    }
11    return max_so_far;
12 }
13
14 int maxCircularSum(int arr[], int n) {
15     int max_kadane = kadane(arr, n);
16     int max_wrap = 0;
17     for (int i = 0; i < n; i++) {
18         max_wrap += arr[i];
19         arr[i] = -arr[i];
20     }
21     max_wrap = max_wrap + kadane(arr, n);
22     return (max_wrap > max_kadane) ? max_wrap : max_kadane;
23 }
24
```

Output

```
/tmp/a.out
Maximum circular sum is 15
```

```
1  #include <stdio.h>
2  int longestIncreasingSubarray(int arr[], int n) {
3      int maxLength = 1;
4      int currentLength = 1;
5      for (int i = 1; i < n; i++) {
6          if (arr[i] > arr[i - 1]) {
7              currentLength++;
8          } else {
9              currentLength = 1;
10         }
11         if (currentLength > maxLength) {
12             maxLength = currentLength;
13         }
14     }
15
16     return maxLength;
17 }
18
19 int main() {
20     int arr[] = {2, 2, 2, 2, 1, 3, 4, 7, 8, 9, 1};
21     int n = sizeof(arr) / sizeof(arr[0]);
22     printf("Length of the longest contiguous
    increasing subarray: %d\n",
    longestIncreasingSubarray(arr, n));
23     return 0;
24 }
```

```
/tmp/a.out
Length of the longest contiguous increasing subarray:
6
|
```


Programiz PRO

C Playground C Programs

Explorer

main.c

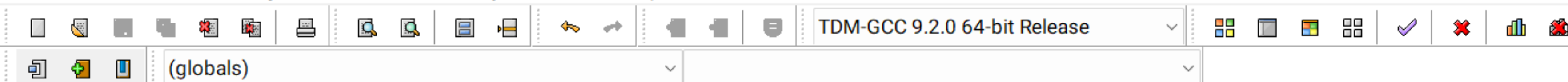
main.c x

Save Run

```
1 #include <stdio.h>
2 int sumOfFirstNNaturalNumbers(int n) {
3     int sum = 0;
4     for (int i = 1; i <= n; i++) {
5         sum += i;
6     }
7
8     return sum;
9 }
10
11 int main() {
12     int n;
13     printf("Enter the value of n: ");
14     scanf("%d", &n);
15
16     int sum = sumOfFirstNNaturalNumbers(n);
17
18     printf("Sum of the first %d natural numbers:
19 %d\n", n, sum);
20
21     return 0;
22 }
```

Output

/tmp/a.out
Enter the value of n: 4
Sum of the first 4 natural numbers: 10



Project Class palindrom.c

```
1 #include <stdio.h>
2 #include <string.h>
3 int isPalindrome(char str[], int start, int end) {
4     while (start < end) {
5         if (str[start] != str[end])
6             return 0;
7         start++;
8         end--;
9     }
10    return 1;
11 }
12 void longestPalSubstr(char str[]) {
13     int maxLength = 1;
14     int start = 0;
15     int len = strlen(str);
16     int low, high;
17
18     for (int i = 1; i < len; ++i) {
19         low = i - 1;
20         high = i;
21         while (low >= 0 && high < len && str[low] == str[high]) {
22             if (high - low + 1 > maxLength) {
23                 start = low;
24                 maxLength = high - low + 1;
25             }
26             low--;
27             high++;
28         }
29     }
```

Compiler Resources Compile Log Debug Find Results Console Close

Abort Compilation

```
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\Byalla Vishnu\Desktop\palindrome.exe
- Output Size: 323.3505859375 KiB
- Compilation Time: 0.58s
```

☐ Shorten compiler path

Line: 44 Col: 2 Sel: 0 Lines: 50 Length: 1264 Insert Done parsing in 0.063 s

C:\Users\Byalla Vishnu\Desktop

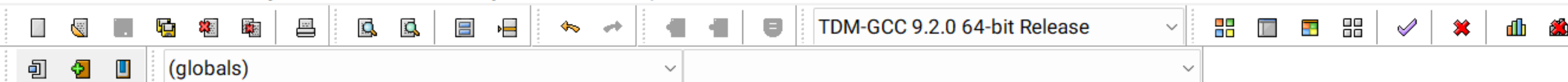
Longest palindromic substring is: bab

```
-----
Process exited after 3.403 seconds with return value 0
Press any key to continue . . . |
```



Search

12:34
24-02-2024



Project Class [*) palindrome.c x area of traingle.c x

```
1 #include <stdio.h>
2 #include <math.h>
3 double areaOfTriangle(double side1, double side2, double side3) {
4     double s = (side1 + side2 + side3) / 2;
5     double area = sqrt(s * (s - side1) * (s - side2) * (s - side3));
6     return area;
7 }
8 int main() {
9     double side1, side2, side3;
10    printf("Enter the length of side 1: ");
11    scanf("%lf", &side1);
12    printf("Enter the length of side 2: ");
13    scanf("%lf", &side2);
14    printf("Enter the length of side 3: ");
15    scanf("%lf", &side3);
16    double area = areaOfTriangle(side1, side2, side3);
17    printf("The area of the triangle is: %.2lf\n", area);
18    return 0;
19 }
20
```

Compiler Resources Compile Log Debug Find Results Console Close

Abort Compilation

☐ Shorten compiler path

```
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\Byalla Vishnu\Desktop\area of traingle.exe
- Output Size: 327.0849609375 KiB
- Compilation Time: 0.31s
```

Line: 17 Col: 58 Sel: 0 Lines: 20 Length: 638 Insert Done parsing in 0.015 s

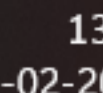
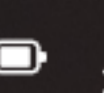
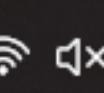
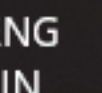
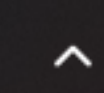
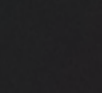
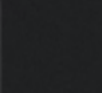
C:\Users\Byalla Vishnu\Desktop

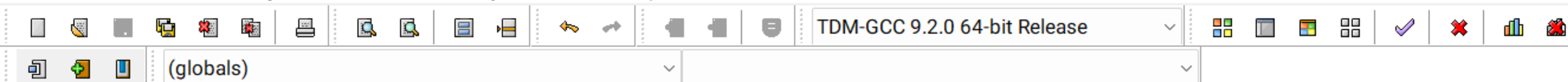
```
Enter the length of side 1: 7
Enter the length of side 2: 8
Enter the length of side 3: 6
The area of the triangle is: 20.33
```

```
-----
Process exited after 20.25 seconds with return value 0
Press any key to continue . . .
```



Search

ENG
IN13:08
24-02-2024



Project Class [*] palindrome.c [*] area of triangle.c factorial of given number.cpp

```
1 #include <stdio.h>
2 unsigned long long factorial(unsigned int n) {
3     if (n == 0) {
4         return 1;
5     } else {
6         return n * factorial(n - 1);
7     }
8 }
9 int main() {
10     unsigned int num;
11     printf("Enter a non-negative integer: ");
12     scanf("%u", &num);
13     unsigned long long fact = factorial(num);
14     printf("Factorial of %u = %llu\n", num, fact);
15     return 0;
16 }
17
```

Compiler Resources Compile Log Debug Find Results Console Close

Abort Compilation

```
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\Byalla Vishnu\Desktop\factorial of given number.
- Output Size: 322.8447265625 KiB
- Compilation Time: 0.50s
```

☐ Shorten compiler path

Line: 8 Col: 2 Sel: 0 Lines: 17 Length: 395 Insert Done parsing in 0 seconds

C:\Users\Byalla Vishnu\Desktop

```
Enter a non-negative integer: 6
Factorial of 6 = 720
```

```
-----
Process exited after 54.05 seconds with return value 0
Press any key to continue . . .
```



Search

ENG
IN14:01
24-02-2024


```
1  #include <stdio.h>
2  #include <math.h>
3
4  // Function to find the roots of a quadratic equation
5  void findRoots(double a, double b, double c) {
6      double discriminant, root1, root2;
7
8      // Calculate the discriminant
9      discriminant = b * b - 4 * a * c;
10
11     // Check the value of the discriminant
12     if (discriminant > 0) {
13         // Real and different roots
14         root1 = (-b + sqrt(discriminant)) / (2 * a);
15         root2 = (-b - sqrt(discriminant)) / (2 * a);
16         printf("Roots: x1 = %.2f, x2 = %.2f\n", root1,
17             root2);
18     } else if (discriminant == 0) {
19         // Real and equal roots
20         root1 = root2 = -b / (2 * a);
21         printf("Roots: x1 = x2 = %.2f\n", root1);
22     } else {
23         // Complex roots
24         double realPart = -b / (2 * a);
25         double imaginaryPart = sqrt(-discriminant) / (2 *
26             a);
27         printf("Roots: x1 = %.2f + %.2fi, x2 = %.2f - %.
28             2fi\n", realPart, imaginaryPart, realPart,
29             imaginaryPart);
30     }
31 }
32
33 int main() {
34     // Coefficients of the quadratic equation
35     double a = 1, b = -3, c = 2;
```

/tmp/a.out

Roots: x1 = 2.00, x2 = 1.00

□


```
1  #include <stdio.h>
2
3  // Function to convert Celsius to Fahrenheit
4  double celsiusToFahrenheit(double celsius) {
5      return (celsius * 9 / 5) + 32;
6  }
7
8  // Function to convert Fahrenheit to Celsius
9  double fahrenheitToCelsius(double fahrenheit) {
10     return (fahrenheit - 32) * 5 / 9;
11 }
12
13 int main() {
14     double temperatureCelsius, temperatureFahrenheit;
15
16     // Get temperature in Celsius from user
17     printf("Enter temperature in Celsius: ");
18     scanf("%lf", &temperatureCelsius);
19
20     // Convert Celsius to Fahrenheit
21     temperatureFahrenheit = celsiusToFahrenheit
22     (temperatureCelsius);
23     printf("Temperature in Fahrenheit: %.2f\n",
24     temperatureFahrenheit);
25
26     // Get temperature in Fahrenheit from user
27     printf("Enter temperature in Fahrenheit: ");
28     scanf("%lf", &temperatureFahrenheit);
29
30     // Convert Fahrenheit to Celsius
31     temperatureCelsius = fahrenheitToCelsius
32     (temperatureFahrenheit);
33     printf("Temperature in Celsius: %.2f\n",
34     temperatureCelsius);
35 }
```

/tmp/a.out

Enter temperature in Celsius: 100

Temperature in Fahrenheit: 212.00

Enter temperature in Fahrenheit: 100

Temperature in Celsius: 37.78


```
1  #include <stdio.h>
2
3  // Function to convert Celsius to Fahrenheit
4  double celsiusToFahrenheit(double celsius) {
5      return (celsius * 9 / 5) + 32;
6  }
7
8  // Function to convert Fahrenheit to Celsius
9  double fahrenheitToCelsius(double fahrenheit) {
10     return (fahrenheit - 32) * 5 / 9;
11 }
12
13 int main() {
14     double temperatureCelsius, temperatureFahrenheit;
15
16     // Get temperature in Celsius from user
17     printf("Enter temperature in Celsius: ");
18     scanf("%lf", &temperatureCelsius);
19
20     // Convert Celsius to Fahrenheit
21     temperatureFahrenheit = celsiusToFahrenheit
22     (temperatureCelsius);
23     printf("Temperature in Fahrenheit: %.2f\n",
24     temperatureFahrenheit);
25
26     // Get temperature in Fahrenheit from user
27     printf("Enter temperature in Fahrenheit: ");
28     scanf("%lf", &temperatureFahrenheit);
29
30     // Convert Fahrenheit to Celsius
31     temperatureCelsius = fahrenheitToCelsius
32     (temperatureFahrenheit);
33     printf("Temperature in Celsius: %.2f\n",
34     temperatureCelsius);
35 }
```

/tmp/a.out

Enter temperature in Celsius: 100

Temperature in Fahrenheit: 212.00

Enter temperature in Fahrenheit: 100

Temperature in Celsius: 37.78