

read and print.cpp wages.cpp roll number.cpp temp.cpp alphabet.cpp [*] harmonic.cpp pascal.cpp

```
1 #include <stdio.h>
2
3 int main() {
4     int rows, coef = 1, space, i, j;
5     printf("Enter the number of rows: ");
6     scanf("%d", &rows);
7     for(i = 0; i < rows; i++) {
8         for(space = 1; space <= rows - i; space++)
9             printf(" ");
10        for(j = 0; j <= i; j++) {
11            if (j == 0 || i == 0)
12                coef = 1;
13            else
14                coef = coef * (i - j + 1) / j;
15            printf("%4d", coef);
16        }
17        printf("\n");
18    }
19    return 0;
20 }
21
```

C:\Users\gavin\OneDrive\Documents\pascal.exe

Enter the number of rows: 5

```

      1
    1 1
  1 2 1
1 3 3 1
1 4 6 4 1
```

Process exited after 4.97 seconds with return value 0
Press any key to continue . . .

read and print.cpp wages.cpp roll number.cpp temp.cpp [*] Untitled6

```
1  #include <stdio.h>
2
3  int main()
4  {
5      float temp;
6
7      printf("Enter temperature in centigrade: ");
8      scanf("%f", &temp);
9
10     if (temp < 0) {
11         printf("Freezing weather\n");
12     } else if (temp >= 0 && temp < 10) {
13         printf("Very cold weather\n");
14     } else if (temp >= 10 && temp < 20) {
15         printf("Cold weather\n");
16     } else if (temp >= 20 && temp < 30) {
17         printf("Normal in Temp\n");
18     } else if (temp >= 30 && temp < 40) {
19         printf("It's hot\n");
20     } else {
21         printf("It's very hot\n");
22     }
23
24     return 0;
```

Select C:\Users\gavin\OneDrive\Documents\temp....

```
Enter temperature in centigrade: 22
Normal in Temp

-----
Process exited after 1.956 seconds with return value 0
Press any key to continue . . .
```

Compile Log Debug Find Results Close

read and print.cpp wages.cpp roll number.cpp temp.cpp alphabet.cpp [*] harmonic.cpp [*] pascal.cpp

```
1  #include <stdio.h>
2
3  int main() {
4      float temp;
5
6      printf("Enter temperature in centigrade: ");
7      scanf("%f", &temp);
8
9      if (temp < 0) {
10         printf("Freezing weather\n");
11     } else if (temp >= 0 && temp < 10) {
12         printf("Very cold weather\n");
13     } else if (temp >= 10 && temp < 20) {
14         printf("Cold weather\n");
15     } else if (temp >= 20 && temp < 30) {
16         printf("Normal in Temp\n");
17     } else if (temp >= 30 && temp < 40) {
18         printf("It's hot\n");
19     } else {
20         printf("It's very hot\n");
21     }
22
23     return 0;
24 }
```

C:\Users\gavin\OneDrive\Documents\temp.exe

Enter temperature in centigrade: 42
It's very hot

Process exited after 5.3 seconds with return value 0
Press any key to continue . . .

read and print.cpp wages.cpp roll number.cpp temp.cpp alphabet.cpp [*] harmonic.cpp [*] pascal.cpp

```
1  #include <stdio.h>
2
3  int main() {
4      char ch;
5
6      printf("Enter a character: ");
7      scanf("%c", &ch);
8
9      if ((ch >= 'a' && ch <= 'z') || (ch >= 'A' && ch <= 'Z')) {
10         printf("%c is an alphabet.\n", ch);
11     }
12     else if (ch >= '0' && ch <= '9') {
13         printf("%c is a digit.\n", ch);
14     }
15     else {
16         printf("%c is a special character.\n", ch);
17     }
18
19     return 0;
20 }
```

C:\Users\gavin\OneDrive\Documents\alphabet.exe

Enter a character: #
is a special character.

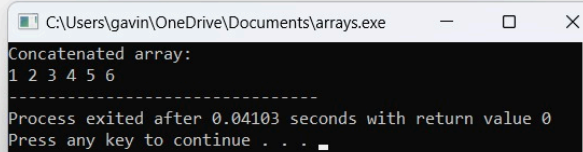
Process exited after 5.544 seconds with return value 0
Press any key to continue . . .

es Compile Log Debug Find Results Close

Compilation results...

read and print.cpp wages.cpp roll number.cpp temp.cpp alphabet.cpp [*] harmonic.cpp pascal.cpp arrays.cpp

```
1 #include <stdio.h>
2
3 int main() {
4     int arr1[] = {1, 2, 3};
5     int arr2[] = {4, 5, 6};
6     int n1 = sizeof(arr1) / sizeof(int);
7     int n2 = sizeof(arr2) / sizeof(int);
8     int n = n1 + n2;
9     int arr3[n];
10    int i, j;
11
12    for (i = 0; i < n1; i++) {
13        arr3[i] = arr1[i];
14    }
15
16    for (j = 0; j < n2; j++) {
17        arr3[i] = arr2[j];
18        i++;
19    }
20
21    printf("Concatenated array:\n");
22
23    for (i = 0; i < n; i++) {
24        printf("%d ", arr3[i]);
25    }
26
27    return 0;
28 }
```



C:\Users\gavin\OneDrive\Documents\arrays.exe

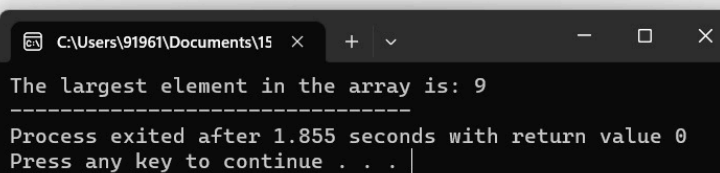
Concatenated array:
1 2 3 4 5 6

Process exited after 0.04103 seconds with return value 0
Press any key to continue . . .

obals)

15.CLASSWORK 5.cpp

```
1  #include <stdio.h>
2
3  int largestElement(int arr[], int size) {
4      if (size == 1) {
5          return arr[0];
6      } else {
7          int max = largestElement(arr, size - 1);
8          if (arr[size - 1] > max) {
9              return arr[size - 1];
10         } else {
11             return max;
12         }
13     }
14 }
15
16 int main() {
17     int arr[] = {1, 3, 5, 7, 9, 2, 4, 6, 8};
18     int size = sizeof(arr) / sizeof(arr[0]);
19
20     int max = largestElement(arr, size);
21
22     printf("The largest element in the array is: %d", max);
23
24     return 0;
25 }
```



C:\Users\91961\Documents\15 x + v - □ ×

The largest element in the array is: 9

Process exited after 1.855 seconds with return value 0
Press any key to continue . . . |

9.CLASSWORK5.cpp

```
1 #include <stdio.h>
2
3 int main (void)
4 {
5     int a[10][10];
6     int i = 0, j = 0, row = 0, col = 0;
7
8     printf ("Enter the order of the matrix (mxn):\n");
9     printf ("where m = number of rows; and\n");
10    printf ("n = number of columns\n");
11    scanf ("%d %d", &row, &col);
12
13    int flag = 0;
14
15    printf ("Enter the elements of the matrix\n");
16    for (i = 0; i < row; i++)
17    {
18        for (j = 0; j < col; j++)
19        {
20            scanf ("%d", &a[i][j]);
21        }
22    }
23
24    for (i = 0; i < row; i++)
25    {
26        for (j = 0; j < col; j++)
27        {
28            if (i == j && a[i][j] != 1)
29            {
30                flag = -1;
31                break;
32            }
33            else if (i != j && a[i][j] != 0)
34            {
35                flag = -1;
36                break;
37            }
38        }
39    }
40
41    if (flag == 0)
42    {
43        printf ("It is a IDENTITY MATRIX\n");
44    }
45    else
46    {
47        printf ("It is NOT an identity matrix\n");
48    }
49
50    return 0;
51 }
```

```
C:\Users\91961\Documents\9. x + v - □ x
Enter the order of the matrix (mxn):
where m = number of rows; and
n = number of columns
3
3
Enter the elements of the matrix
1
0
0
0
0
1
0
0
0
0
1
It is a IDENTITY MATRIX

-----
Process exited after 112 seconds with return value 0
Press any key to continue . . . |
```

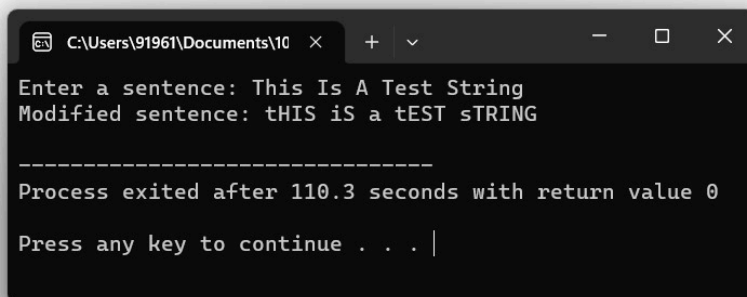
```
1 CLASSWORK 5.cpp
2
3 #include <stdio.h>
4
5 int main() {
6     int age;
7
8     printf("Enter your age: ");
9     scanf("%d", &age);
10
11     if (age >= 18) {
12         printf("Congratulations! You are eligible to cast your own vote.\n");
13     } else {
14         printf("Sorry, you are not eligible to cast your own vote.\n");
15     }
16
17     return 0;
18 }
```

```
C:\Users\91961\Documents\1.1
Enter your age: 21
Congratulations! You are eligible to cast your own vote
.

-----
Process exited after 18.82 seconds with return value 0
Press any key to continue . . . |
```


10.CLASSWORK 5.cpp

```
1  #include <stdio.h>
2  #include <ctype.h>
3
4  int main() {
5      char sentence[1000];
6      int i;
7
8      printf("Enter a sentence: ");
9      fgets(sentence, 1000, stdin);
10
11     for (i = 0; sentence[i] != '\0'; i++) {
12         if (islower(sentence[i]))
13             sentence[i] = toupper(sentence[i]);
14         else if (isupper(sentence[i]))
15             sentence[i] = tolower(sentence[i]);
16     }
17
18     printf("Modified sentence: %s", sentence);
19
20     return 0;
21 }
```



```
C:\Users\91961\Documents\10 >
Enter a sentence: This Is A Test String
Modified sentence: tHIS iS a tEST sTRING

-----
Process exited after 110.3 seconds with return value 0
Press any key to continue . . . |
```

```

11.classwork 5.cpp
1  #include <stdio.h>
2  #include <string.h>
3
4  int main() {
5      char str[100];
6      int count[256] = {0}; // Initialize the count array to zero
7
8      printf("Enter a string: ");
9      fgets(str, sizeof(str), stdin);
10
11     // Count the occurrences of each character in the string
12     for (int i = 0; i < strlen(str); i++) {
13         count[(int)str[i]]++;
14     }
15
16     // Print the count of each character
17     printf("Character count:\n");
18     for (int i = 0; i < 256; i++) {
19         if (count[i] > 0) {
20             printf("%c: %d\n", i, count[i]);
21         }
22     }
23
24     return 0;
25 }

```

```

C:\Users\91961\Documents\11
Enter a string: way2sms.com
Character count:

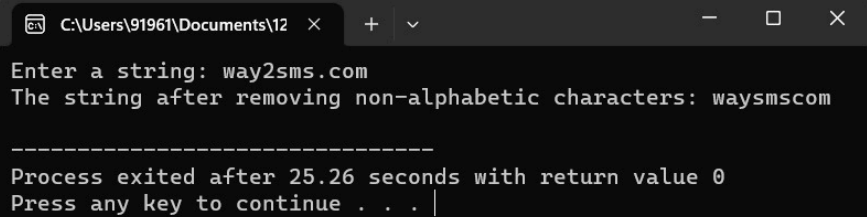
: 1
.: 1
2: 1
a: 1
c: 1
m: 2
o: 1
s: 2
w: 1
y: 1

-----
Process exited after 31.77 seconds with return value 0
Press any key to continue . . .

```

12.classwork 5.cpp

```
1  #include <stdio.h>
2  #include <string.h>
3  #include <ctype.h>
4
5  int main()
6  {
7      char str[100];
8      int i, j;
9
10     printf("Enter a string: ");
11     fgets(str, sizeof(str), stdin);
12
13     for(i = 0, j = 0; i < strlen(str); i++)
14     {
15         if(isalpha(str[i]))
16         {
17             str[j] = str[i];
18             j++;
19         }
20     }
21     str[j] = '\0';
22
23     printf("The string after removing non-alphabetic characters: %s", str);
24
25     return 0;
26 }
```



```
C:\Users\91961\Documents\12
Enter a string: way2sms.com
The string after removing non-alphabetic characters: waysmscom
-----
Process exited after 25.26 seconds with return value 0
Press any key to continue . . .
```

13.CLASSWORK5.cpp

```
1 #include <stdio.h>
2
3 // Function to calculate the nth Fibonacci number using recursion
4 int fibonacci(int n)
5 {
6     // Base case
7     if (n <= 1)
8         return n;
9
10    // Recursive case
11    return fibonacci(n-1) + fibonacci(n-2);
12 }
13
14 int main()
15 {
16     int n;
17
18     // Get input from user
19     printf("Enter the number of terms in the Fibonacci series: ");
20     scanf("%d", &n);
21
22     // Print the Fibonacci series
23     printf("Fibonacci series: ");
24     for (int i = 0; i < n; i++)
25     {
26         printf("%d ", fibonacci(i));
27     }
28
29     return 0;
30 }
```

```
C:\Users\91961\Documents\13 x + v - □ ×
Enter the number of terms in the Fibonacci series: 10
Fibonacci series: 0 1 1 2 3 5 8 13 21 34
-----
Process exited after 29.27 seconds with return value 0
Press any key to continue . . . |
```

```
14.CLASSWORK 5.cpp
1  #include <stdio.h>
2
3  int gcd(int a, int b);
4
5  int main() {
6      int num1, num2;
7      printf("Enter two numbers: ");
8      scanf("%d %d", &num1, &num2);
9      printf("GCD of %d and %d is %d", num1, num2, gcd(num1, num2));
10     return 0;
11 }
12
13 int gcd(int a, int b) {
14     if (b == 0) {
15         return a;
16     }
17     return gcd(b, a % b);
18 }
```

```
C:\Users\91961\Documents\14 x + v - □ ×
Enter two numbers: 10
50
GCD of 10 and 50 is 10
-----
Process exited after 20.53 seconds with return value 0
Press any key to continue . . . |
```

7.CLASSWORK 5.cpp

```
1 #include <stdio.h>
2 #include <stdlib.h>
3
4 int main()
5 {
6     int a[10][10], b[10][10];
7     int i, j, row1, column1, row2, column2, flag = 1;
8
9     printf("Enter the order of the matrix A \n");
10    scanf("%d %d", &row1, &column1);
11
12    printf("Enter the order of the matrix B \n");
13    scanf("%d %d", &row2, &column2);
14
15    printf("Enter the elements of matrix A \n");
16    for (i = 0; i < row1; i++)
17    {
18        for (j = 0; j < column1; j++)
19        {
20            scanf("%d", &a[i][j]);
21        }
22    }
23
24    printf("Enter the elements of matrix B \n");
25    for (i = 0; i < row2; i++)
26    {
27        for (j = 0; j < column2; j++)
28        {
29            scanf("%d", &b[i][j]);
30        }
31    }
32
33    printf("MATRIX A is \n");
34    for (i = 0; i < row1; i++)
35    {
36        for (j = 0; j < column1; j++)
37        {
38            printf("%3d", a[i][j]);
39        }
40        printf("\n");
41    }
42
43    printf("MATRIX B is \n");
44    for (i = 0; i < row2; i++)
45    {
46        for (j = 0; j < column2; j++)
47        {
48            printf("%3d", b[i][j]);
49        }
50        printf("\n");
51    }
52
53    return 0;
54 }
```

sources Compile Log Debug Find Results Console Close

- Errors: 0
- Warnings: 0

C:\Users\91961\Documents\7.

```
Enter the order of the matrix A
2 2
Enter the order of the matrix B
2 2
Enter the elements of matrix A
1
2
3
4
Enter the elements of matrix B
1
2
3
4
MATRIX A is
 1  2
 3  4
MATRIX B is
 1  2
 3  4
Matrices can be compared
Two matrices are equal
```

```
-----
Process exited after 35.78 seconds with return value 0
Press any key to continue . . . |
```

```
33 printf("MATRIX A is \n");
34 for (i = 0; i < row1; i++)
35 {
36     for (j = 0; j < column1; j++)
37     {
38         printf("%3d", a[i][j]);
39     }
40     printf("\n");
41 }
42
43
44
45 printf("MATRIX B is \n");
46 for (i = 0; i < row2; i++)
47 {
48     for (j = 0; j < column2; j++)
49     {
50         printf("%3d", b[i][j]);
51     }
52     printf("\n");
53 }
54
55
56 /* Comparing two matrices for equality */
57
58 if (row1 == row2 && column1 == column2)
59 {
60     printf("Matrices can be compared \n");
61     for (i = 0; i < row1; i++)
62     {
63         for (j = 0; j < column2; j++)
64         {
65             if (a[i][j] != b[i][j])
66             {
67                 flag = 0;
68                 break;
69             }
70         }
71     }
72
73     else
74     {
75         printf("Cannot be compared\n");
76         exit(1);
77     }
78
79     if (flag == 1)
80     {
81         printf("Two matrices are equal \n");
82     }
83     else
84     {
85         printf("But, two matrices are not equal \n");
86     }
87 }
```

sources Compile Log Debug Find Results Console Close

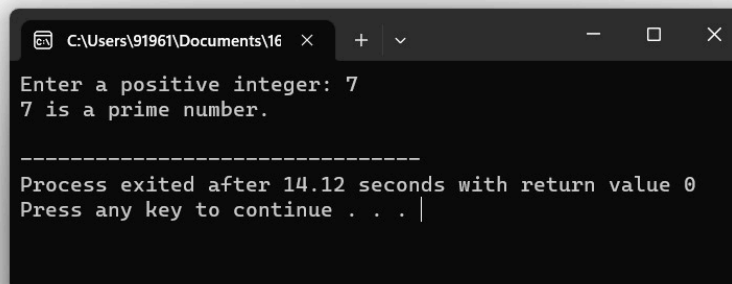
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\91961\Documents\7.CLASSWORK 5.exe

```
C:\Users\91961\Documents\7. x + v -
Enter the order of the matrix A
2 2
Enter the order of the matrix B
2 2
Enter the elements of matrix A
1
2
3
4
Enter the elements of matrix B
1
2
3
4
MATRIX A is
1 2
3 4
MATRIX B is
1 2
3 4
Matrices can be compared
Two matrices are equal

-----
Process exited after 35.78 seconds with return value 0
Press any key to continue . . . |
```

16.CLASSWORK 5.cpp

```
1  #include <stdio.h>
2
3  int isPrime(int n, int i);
4
5  int main() {
6      int num;
7
8      printf("Enter a positive integer: ");
9      scanf("%d", &num);
10
11     if (isPrime(num, num/2) == 1) {
12         printf("%d is a prime number.\n", num);
13     } else {
14         printf("%d is not a prime number.\n", num);
15     }
16
17     return 0;
18 }
19
20 int isPrime(int n, int i) {
21     if (i == 1) {
22         return 1;
23     } else {
24         if (n % i == 0) {
25             return 0;
26         } else {
27             return isPrime(n, i-1);
28         }
29     }
30 }
```



```
C:\Users\91961\Documents\16
Enter a positive integer: 7
7 is a prime number.

-----
Process exited after 14.12 seconds with return value 0
Press any key to continue . . . |
```