

```
CAUsers\vishn\c\gdhdhgd.c - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(globals)
gdhdhgd.c
1 #include <stdio.h>
2 #include <limits.h> // For INT_MAX and INT_MIN
3
4 int reverse(int x) {
5     int reversed = 0;
6
7     while (x != 0) {
8         int digit = x % 10;
9         x = x / 10;
10
11         // Check for overflow before multiplying and adding
12         if (reversed > INT_MAX/10 || (reversed == INT_MAX/10 && digit > 7)) {
13             return 0; // Overflow
14         }
15         if (reversed < INT_MIN/10 || (reversed == INT_MIN/10 && digit < -8)) {
16             return 0; // Underflow
17         }
18         reversed = reversed * 10 + digit;
19     }
20     return reversed;
21 }
22
23 int main() {
24     int num;
25
26     printf("Enter a 32-bit signed integer: ");
27     scanf("%d", &num);
28
29     int result = reverse(num);
30     if (result == 0 && num != 0)
31         printf("Overflow occurred. Cannot reverse safely.\n");
32     else
33         printf("Reversed integer: %d\n", result);
34
35     return 0;
36 }
```

```
C:\Users\vishn\c\gdhdhgd.exe x + v
Enter a 32-bit signed integer: 123
Reversed integer: 321

-----
Process exited after 8.719 seconds with return value 0
Press any key to continue . . . |
```

```
C:\Users\vishn\c\gdhdhgd.c - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
IDM-GCC 4.9.1
gdhdhgd.c:1:1: warning: ISO C90 forbids mixed declarations and code [-Wdeclaration-after-statement]
1 | #include <stdio.h>
  | ^~~~~~
2 | #include <ctype.h>
  | ^~~~~~
3 | #include <string.h>
  | ^~~~~~
4 |
5 | int isValidString(char str[]) {
6 |     int i;
7 |     int len = strlen(str);
8 |     if (len == 0) return 0; // Empty string is invalid
9 |     for (i = 0; i < len; i++) {
10 |         if (!isalpha(str[i])) {
11 |             return 0; // Not a valid character
12 |         }
13 |     }
14 |     return 1; // Valid string
15 | }
16 |
17 | int main() {
18 |     char str[100];
19 |     scanf("%s", str); // Reads string until space
20 |
21 |     if (isValidString(str)) {
22 |         printf("Valid string (contains only letters).\n");
23 |     } else {
24 |         printf("Invalid string (contains non-letter characters).\n");
25 |     }
26 |
27 |     return 0;
28 | }
29 |
30 |
31 |
32 |
33 |
```

Col: 1 Sel: 0 Lines: 33 Length: 691 Insert Done parsing in 0.015 seconds

```
C:\Users\vishn\c\gdhdhgd.exe x + v
Enter a string: hello
Valid string (contains only letters).

Process exited after 10.91 seconds with return value 0
Press any key to continue: . . . . .

PRESS ANY KEY TO CONTINUE . . . . .
```

```
CAUsers\vishn\c\gdhdhgd.c - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(globals)
gdhdhgd.c
1 #include <stdio.h>
2
3 int main() {
4     int a[100], b[100], merged[200];
5     int n1, n2, i, j;
6
7     // Input for first array
8     printf("Enter the number of elements in the first array: ");
9     scanf("%d", &n1);
10    printf("Enter %d elements of the first array:\n", n1);
11    for(i = 0; i < n1; i++) {
12        scanf("%d", &a[i]);
13    }
14
15    // Input for second array
16    printf("Enter the number of elements in the second array: ");
17    scanf("%d", &n2);
18    printf("Enter %d elements of the second array:\n", n2);
19    for(i = 0; i < n2; i++) {
20        scanf("%d", &b[i]);
21    }
22
23    // Merge arrays
24    for(i = 0; i < n1; i++) {
25        merged[i] = a[i];
26    }
27    for(j = 0; j < n2; j++) {
28        merged[i + j] = b[j];
29    }
30
31    // Print merged array
32    printf("Merged array:\n");
33    for(i = 0; i < n1 + n2; i++) {
34        printf("%d ", merged[i]);
35    }
36
37    return 0;
38 }
39
```

```
C:\Users\vishn\c\gdhdhgd.exe
Enter the number of elements in the first array: 2
Enter 2 elements of the first array:
1 2
Enter the number of elements in the second array: 2
Enter 2 elements of the second array:
2 3
Merged array:
1 2 2 3
-----
Process exited after 14.57 seconds with return value 0
Press any key to continue . . .
```

```
C:\Users\vishn\c\gdhdhgd.c - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(globals)
gdhdhgd.c
1 #include <stdio.h>
2
3 int main() {
4     int arr[100], n, i, j, count;
5
6     printf("Enter the number of elements in the array: ");
7     scanf("%d", &n);
8
9     printf("Enter %d elements:\n", n);
10    for(i = 0; i < n; i++) {
11        scanf("%d", &arr[i]);
12    }
13
14    printf("Duplicate elements in the array:\n");
15
16    for(i = 0; i < n; i++) {
17        count = 1;
18        if (arr[i] != -1) { // check if already marked
19            for(j = i + 1; j < n; j++) {
20                if(arr[i] == arr[j]) {
21                    count++;
22                    arr[j] = -1; // Mark as counted
23                }
24            }
25            if(count > 1) {
26                printf("%d (repeated %d times)\n", arr[i], count);
27            }
28        }
29    }
30
31    return 0;
32 }
33
```

```
C:\Users\vishn\c\gdhdhgd.exe x + v
Enter the number of elements in the array: 5
Enter 5 elements:
2 3 2 4 5 2
Duplicate elements in the array:
2 (repeated 2 times)

-----
Process exited after 7.785 seconds with return value 0
Press any key to continue . . . |
```

```
C:\Users\wishn\c\gdhdhgd.c - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(globals)
gdhdhgd.c
46 while (head != NULL) {
47     printf("%d -> ", head->data);
48     head = head->next;
49 }
50 printf("NULL\n");
51 }
52
53 // Main function
54 int main() {
55     struct Node* list1 = NULL;
56     struct Node* list2 = NULL;
57
58     int n1, n2, value, i;
59
60     printf("Enter number of elements in List 1: ");
61     scanf("%d", &n1);
62     printf("Enter elements of List 1:\n");
63     for (i = 0; i < n1; i++) {
64         scanf("%d", &value);
65         append(&list1, value);
66     }
67
68     printf("Enter number of elements in List 2: ");
69     scanf("%d", &n2);
70     printf("Enter elements of List 2:\n");
71     for (i = 0; i < n2; i++) {
72         scanf("%d", &value);
73         append(&list2, value);
74     }
75
76     printf("List 1: ");
77     printList(list1);
78     printf("List 2: ");
79     printList(list2);
80
81     struct Node* mergedList = mergeLists(list1, list2);
82
83     printf("Merged List: ");
84     printList(mergedList);
85
86     return 0;
87 }
88
line: 62 Col: 43 Sel: 0 Lines: 88 Length: 2055 Insert Done parsing in 0 seconds
```

```
C:\Users\wishn\c\gdhdhgd.ex x + v
Enter number of elements in List 1: 1 2 3 4
Enter elements of List 1:
Enter number of elements in List 2: Enter elements of List 2:
5 6 4 8
List 1: 2 -> NULL
List 2: 4 -> 5 -> 6 -> NULL
Merged List: 2 -> 4 -> 5 -> 6 -> NULL

-----
Process exited after 9.444 seconds with return value 0
Press any key to continue . . .
```



```
C:\Users\vishn\c\gdhdhgd.c - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(globals)
gdhdhgd.c
1 #include <stdio.h>
2
3 int main() {
4     int regNos[100], n, i, searchReg, found = 0;
5
6     printf("Enter number of registration numbers: ");
7     scanf("%d", &n);
8
9     printf("Enter %d registration numbers:\n", n);
10    for(i = 0; i < n; i++) {
11        scanf("%d", &regNos[i]);
12    }
13
14    printf("Enter the registration number to search: ");
15    scanf("%d", &searchReg);
16
17    // Linear search
18    for(i = 0; i < n; i++) {
19        if(regNos[i] == searchReg) {
20            found = 1;
21            break;
22        }
23    }
24
25    if(found)
26        printf("Registration number %d found at position %d.\n", searchReg, i + 1);
27    else
28        printf("Registration number %d not found in the list.\n", searchReg);
29
30    return 0;
31 }
32
```

```
C:\Users\vishn\c\gdhdhgd.exe x + v
Enter number of registration numbers: 3
Enter 3 registration numbers:
192424113
192424115
192424118
Enter the registration number to search: 2
Registration number 2 not found in the list.

-----
Process exited after 26.49 seconds with return value 0
Press any key to continue . . . |
```

```
C:\Users\vishn\c\gdhdhgd.c - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(globals)
gdhdhgd.c
1 #include <stdio.h>
2
3 int main() {
4     int arr[100], n, i, element, found = 0;
5
6     // Input size of the array
7     printf("Enter the number of elements in the array: ");
8     scanf("%d", &n);
9
10    // Input array elements
11    printf("Enter %d elements:\n", n);
12    for(i = 0; i < n; i++) {
13        scanf("%d", &arr[i]);
14    }
15
16    // Input element to search
17    printf("Enter the element to find: ");
18    scanf("%d", &element);
19
20    // Search for the element
21    for(i = 0; i < n; i++) {
22        if(arr[i] == element) {
23            printf("Element %d found at position %d (index %d).\n", element, i + 1, i);
24            found = 1;
25            break;
26        }
27    }
28
29    if(!found) {
30        printf("Element %d not found in the array.\n", element);
31    }
32
33    return 0;
34 }
35
```

```
C:\Users\vishn\c\gdhdhgd.exe x + v
Enter the number of elements in the array: 5
Enter 5 elements:
1 2 3 4 5
Enter the element to find: 3
Element 3 found at position 3 (index 2).

-----
Process exited after 8.495 seconds with return value 0
Press any key to continue . . . |
```

```

C:\Users\vishn\c\gdhdhgd.c - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(globals)
gdhdhgd.c
1  #include <stdio.h>
2
3  int main() {
4      int arr[100], n, i;
5
6      // Input array size
7      printf("Enter the number of elements in the array: ");
8      scanf("%d", &n);
9
10     // Input array elements
11     printf("Enter %d elements:\n", n);
12     for(i = 0; i < n; i++) {
13         scanf("%d", &arr[i]);
14     }
15
16     // Print even numbers
17     printf("Even numbers in the array:\n");
18     for(i = 0; i < n; i++) {
19         if(arr[i] % 2 == 0) {
20             printf("%d ", arr[i]);
21         }
22     }
23
24     // Print odd numbers
25     printf("\nOdd numbers in the array:\n");
26     for(i = 0; i < n; i++) {
27         if(arr[i] % 2 != 0) {
28             printf("%d ", arr[i]);
29         }
30     }
31
32     return 0;
33 }
34

```

```

C:\Users\vishn\c\gdhdhgd.exe x + v
Enter the number of elements in the array: 5
Enter 5 elements:
1 2 3 4 5
Even numbers in the array:
2 4
Odd numbers in the array:
1 3 5
-----
Process exited after 6.359 seconds with return value 0
Press any key to continue . . . |

```



```
C:\Users\wishn\c\gdhdhgd.c - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(globals)
gdhdhgd.c
1 #include <stdio.h>
2
3 int main() {
4     int n, i;
5     int t1 = 0, t2 = 1, nextTerm;
6     int sum = 0;
7
8     printf("Enter the number of terms: ");
9     scanf("%d", &n);
10
11     printf("Fibonacci Series: ");
12
13     for(i = 1; i <= n; i++) {
14         printf("%d ", t1);
15         sum += t1;
16
17         nextTerm = t1 + t2;
18         t1 = t2;
19         t2 = nextTerm;
20     }
21
22     printf("\nSum of the Fibonacci series up to %d terms: %d\n", n, sum);
23
24     return 0;
25 }
26
```

```
C:\Users\wishn\c\gdhdhgd.exe x + v
Enter the number of terms: 3
Fibonacci Series: 0 1 1
Sum of the Fibonacci series up to 3 terms: 2

-----
Process exited after 3.74 seconds with return value 0
Press any key to continue . . . |
```

C:\Users\vishn\c\gdhdhgd.c - [Executing] - Dev-C++ 5.11

File Edit Search View Project Execute Tools AStyle Window Help

(globals)

gdhdhgd.c

```
1  #include <stdio.h>
2
3  int main() {
4      int n, i;
5      unsigned long long factorial = 1;
6
7      printf("Enter a positive integer: ");
8      scanf("%d", &n);
9
10     // Handle negative input
11     if (n < 0) {
12         printf("Factorial is not defined for negative numbers.\n");
13     }
14     else {
15         for(i = 1; i <= n; i++) {
16             factorial *= i;
17         }
18         printf("Factorial of %d is %llu\n", n, factorial);
19     }
20     return 0;
21 }
22
```

C:\Users\vishn\c\gdhdhgd.exe x + v

Enter a positive integer: 4
Factorial of 4 is 24

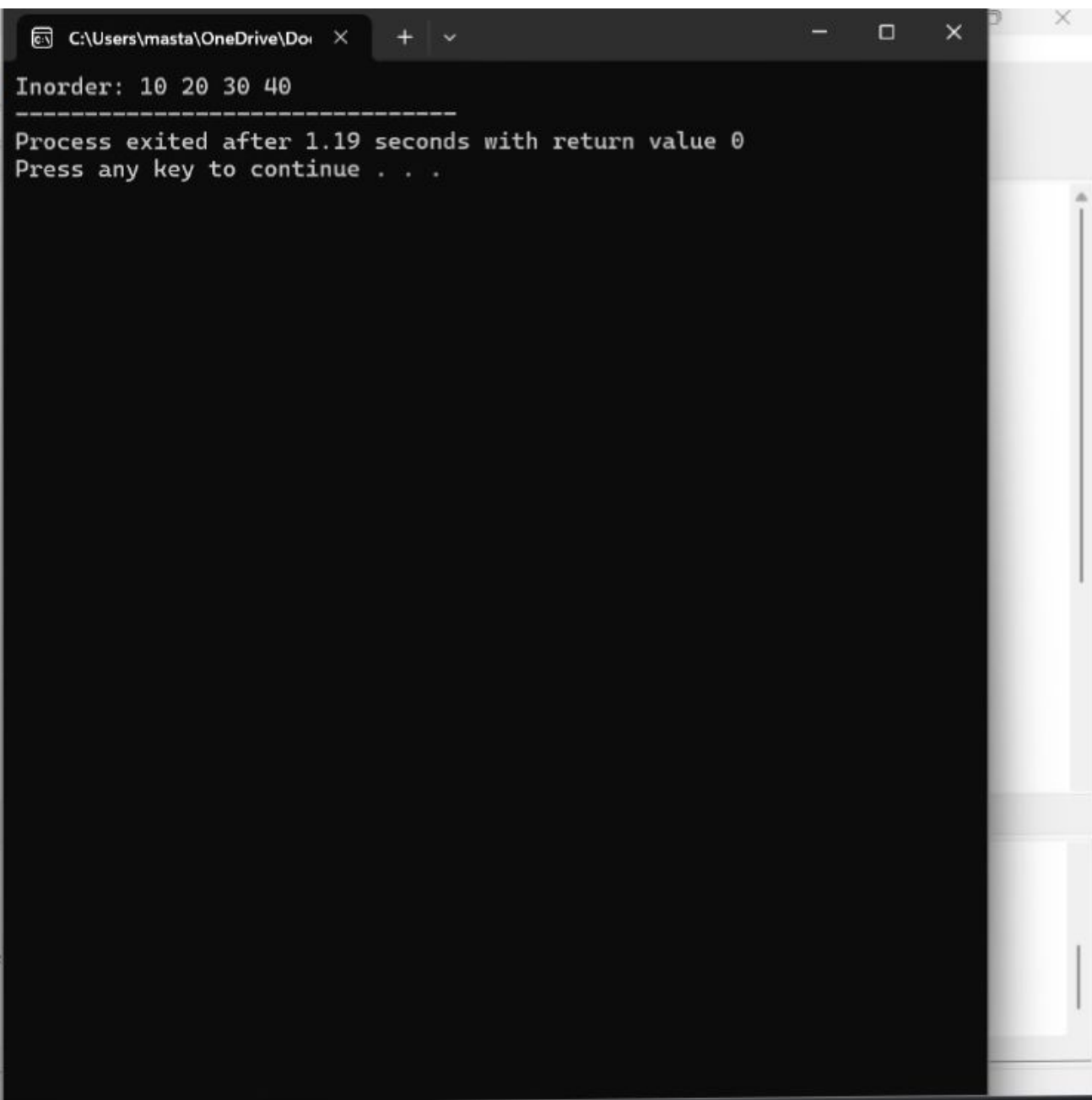
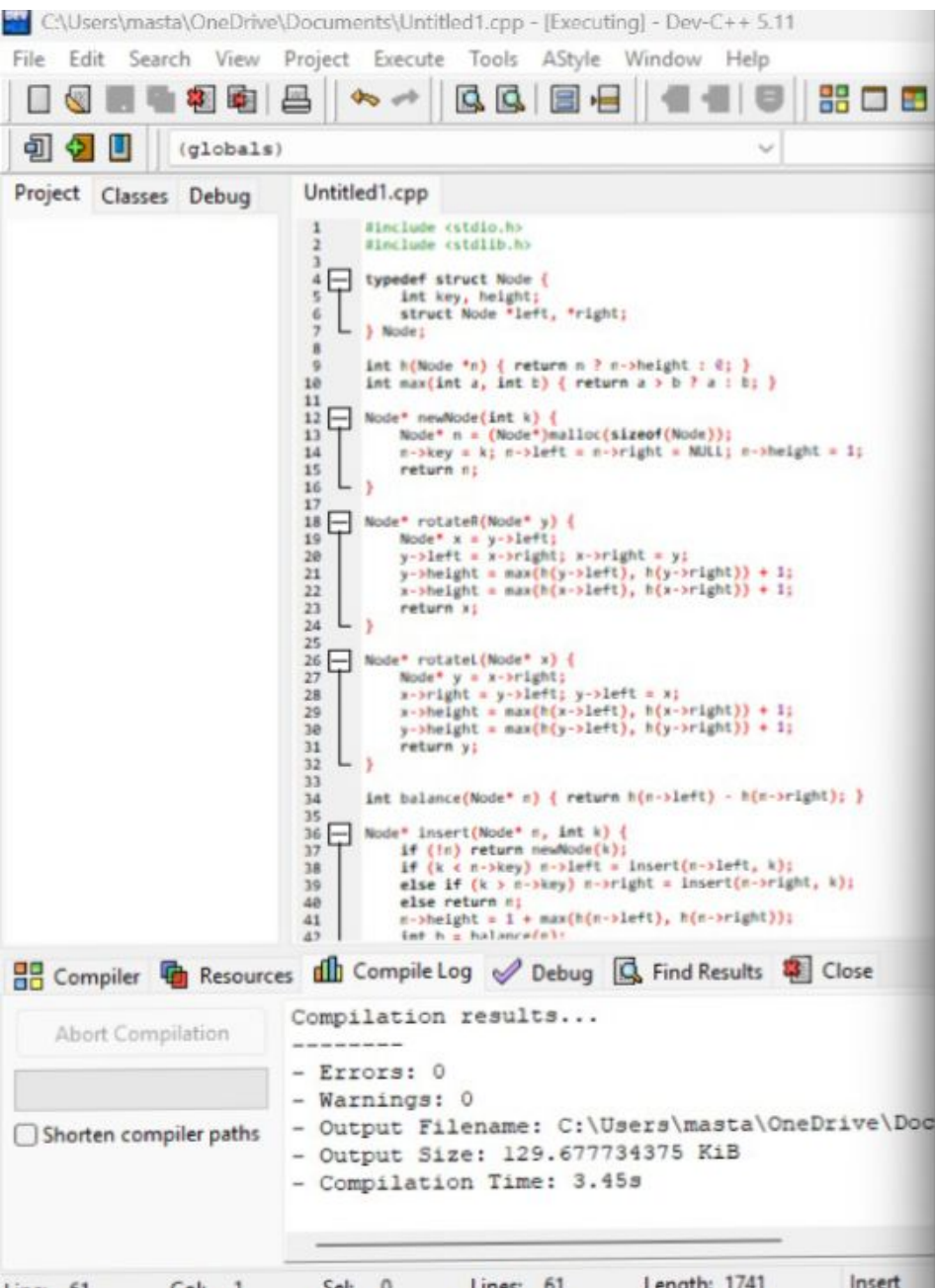
Process exited after 2.215 seconds with return value 0
Press any key to continue . . . |

```
C:\Users\vishn\c\djdj.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(globals)
djdj.cpp
41     for(int i = top; i >= 0; i--) {
42         printf("%d ", stack[i]);
43     }
44     printf("\n");
45 }
46 }
47
48 // Main menu
49 int main() {
50     int choice, value;
51
52     while(1) {
53         printf("\n--- Stack Menu ---\n");
54         printf("1. Push\n2. Pop\n3. Peek\n4. Display\n5. Exit\n");
55         printf("Enter your choice: ");
56         scanf("%d", &choice);
57
58         switch(choice) {
59             case 1:
60                 printf("Enter value to push: ");
61                 scanf("%d", &value);
62                 push(value);
63                 break;
64             case 2:
65                 pop();
66                 break;
67             case 3:
68                 peek();
69                 break;
70             case 4:
71                 display();
72                 break;
73             case 5:
74                 printf("Exiting...\n");
75                 return 0;
76             default:
77                 printf("Invalid choice. Try again.\n");
78         }
79     }
80
81     return 0;
82 }
83
Line: 83 Col: 1 Sel: 0 Lines: 83 Length: 1811 Insert Done parsing in 0.078 seconds
```

```
C:\Users\vishn\c\djdj.exe
--- Stack Menu ---
1. Push
2. Pop
3. Peek
4. Display
5. Exit
Enter your choice: 1
Enter value to push: 5
Pushed 5 onto the stack.

--- Stack Menu ---
1. Push
2. Pop
3. Peek
4. Display
5. Exit
Enter your choice: 4
Stack elements: 5

--- Stack Menu ---
1. Push
2. Pop
3. Peek
4. Display
5. Exit
Enter your choice:
```



```
C:\Users\vishn\c\djdj.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(globals)
djdj.cpp
8   if (cost + graph[pos][start] < *minCost) {
9       *minCost = cost + graph[pos][start];
10  }
11  return *minCost;
12  }
13
14  for (int i = 0; i < n; i++) {
15      if (!visited[i] && graph[pos][i]) {
16          visited[i] = 1;
17          tsp(graph, visited, i, n, count + 1, cost + graph[pos][i], start, minCost);
18          visited[i] = 0; // backtrack
19      }
20  }
21
22  return *minCost;
23  }
24
25  int main() {
26      int graph[MAX][MAX];
27      int visited[MAX] = {0};
28      int n, i, j;
29      int minCost = INT_MAX;
30
31      printf("Enter number of cities: ");
32      scanf("%d", &n);
33
34      printf("Enter distance matrix (0 if no path):\n");
35      for (i = 0; i < n; i++) {
36          for (j = 0; j < n; j++) {
37              scanf("%d", &graph[i][j]);
38          }
39      }
40
41      visited[0] = 1; // Start from city 0
42
43      tsp(graph, visited, 0, n, 1, 0, 0, &minCost);
44
45      printf("Minimum cost to complete TSP: %d\n", minCost);
46
47      return 0;
48  }
49  }
```

```
C:\Users\vishn\c\djdj.exe
Enter number of cities: 4
Enter distance matrix (0 if no path):
0 10 15 20
10 0 35 25
15 35 0 30
20 25 30 0
Minimum cost to complete TSP: 80

-----
Process exited after 24.73 seconds with return value 0
Press any key to continue . . .
```



```
C:\Users\vishn\c\djdj.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(globals)
djdj.cpp
65 }
66 }
67
68 // Main function
69 int main() {
70     struct Node* root = NULL;
71     int n, val, searchKey;
72
73     printf("Enter number of elements to insert in BST: ");
74     scanf("%d", &n);
75
76     printf("Enter the elements:\n");
77     for (int i = 0; i < n; i++) {
78         scanf("%d", &val);
79         root = insert(root, val);
80     }
81
82     printf("Inorder traversal of BST: ");
83     inorder(root);
84     printf("\n");
85
86     // Search
87     printf("Enter element to search: ");
88     scanf("%d", &searchKey);
89     struct Node* found = search(root, searchKey);
90     if (found)
91         printf("Element %d found in BST.\n", searchKey);
92     else
93         printf("Element %d not found in BST.\n", searchKey);
94
95     // Find Min
96     struct Node* minNode = findMin(root);
97     if (minNode)
98         printf("Minimum element in BST: %d\n", minNode->data);
99
100     // Find Max
101     struct Node* maxNode = findMax(root);
102     if (maxNode)
103         printf("Maximum element in BST: %d\n", maxNode->data);
104
105     return 0;
106 }
107
```

```
C:\Users\vishn\c\djdj.exe
Enter number of elements to insert in BST: 7
Enter the elements:
50 30 70 20 40 60 80
Inorder traversal of BST: 20 30 40 50 60 70 80
Enter element to search: 60
Element 60 found in BST.
Minimum element in BST: 20
Maximum element in BST: 80

-----
Process exited after 38.74 seconds with return value 0
Press any key to continue . . .
```

```
C:\Users\vishn\c\sdbhf.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(globals)
sdbhf.cpp
38      dist[u] + graph[u][v] < dist[v]) {
39          dist[v] = dist[u] + graph[u][v];
40      }
41  }
42  }
43
44  // Print results
45  printf("Vertex\tDistance from Source %d\n", src);
46  for(int i = 0; i < n; i++) {
47      printf("%d\t%d\n", i, dist[i]);
48  }
49  }
50
51  // Main function
52  int main() {
53      int graph[MAX][MAX], n, i, j, source;
54
55      printf("Enter the number of vertices: ");
56      scanf("%d", &n);
57
58      printf("Enter the adjacency matrix (use 0 for no edge):\n");
59      for(i = 0; i < n; i++) {
60          for(j = 0; j < n; j++) {
61              scanf("%d", &graph[i][j]);
62          }
63      }
64
65      printf("Enter the source vertex (0 to %d): ", n - 1);
66      scanf("%d", &source);
67
68      dijkstra(graph, n, source);
69
70      return 0;
71  }
```

Line: 72 Col: 1 Sel: 0 Lines: 72 Length: 1844 Insert Done parsing in 0.063 seconds

```
C:\Users\vishn\c\sdbhf.exe
Enter the number of vertices: 4
Enter the adjacency matrix (use 0 for no edge):
0 5 0 10
0 0 3 0
0 0 0 1
0 0 0 0
Enter the source vertex (0 to 3): 0
Vertex Distance from Source 0
0 0
1 5
2 8
3 9

-----
Process exited after 32.05 seconds with return value 0
Press any key to continue . . .
```

```
C:\Users\vishn\c\djdj.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(globals)
djdj.cpp
1 #include <stdio.h>
2
3 // Function to sort in ascending order
4 void sortAscending(int arr[], int n) {
5     for (int i = 0; i < n - 1; i++) {
6         for (int j = 0; j < n - i - 1; j++) {
7             if (arr[j] > arr[j + 1]) {
8                 // Swap
9                 int temp = arr[j];
10                arr[j] = arr[j + 1];
11                arr[j + 1] = temp;
12            }
13        }
14    }
15 }
16
17 // Function to sort in descending order
18 void sortDescending(int arr[], int n) {
19     for (int i = 0; i < n - 1; i++) {
20         for (int j = 0; j < n - i - 1; j++) {
21             if (arr[j] < arr[j + 1]) {
22                 // Swap
23                 int temp = arr[j];
24                 arr[j] = arr[j + 1];
25                 arr[j + 1] = temp;
26             }
27         }
28     }
29 }
30
31 // function to display array
32 void printArray(int arr[], int n) {
33     for (int i = 0; i < n; i++) {
34         printf("%d ", arr[i]);
35     }
36     printf("\n");
37 }
38
39 int main() {
40     int arr[100], n;
41     printf("Enter number of elements: ");
42     scanf("%d", &n);
43     printf("Enter %d elements:\n", n);
44     for (int i = 0; i < n; i++) {
45         scanf("%d", &arr[i]);
46     }
47
48     // Sort and print in ascending order
49     sortAscending(arr, n);
50     printf("Array in Ascending Order: ");
51     printArray(arr, n);
52
53     // Sort and print in descending order
54     sortDescending(arr, n);
55     printf("Array in Descending Order: ");
56     printArray(arr, n);
57
58     return 0;
59 }
60
```

Line: 60 Col: 1 Sel: 0 Lines: 60 Length: 1452 Insert Done parsing in 0.031 seconds

```
C:\Users\vishn\c\djdj.exe
Enter number of elements: 5
Enter 5 elements:
42 10 5 88 23
Array in Ascending Order: 5 10 23 42 88
Array in Descending Order: 88 42 23 10 5

-----
Process exited after 20.11 seconds with return value 0
Press any key to continue . . .
```

Snipping Tool

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```
C:\Users\wshn\c\djdj.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(globals)
djdj.cpp
5 for(int i = 0; i < n; i++) {
6     if(arr[i] == key)
7         return i; // Element found at index i
8 }
9 return -1; // Element not found
10
11 // Function for Binary Search (array must be sorted)
12 int binarySearch(int arr[], int n, int key) {
13     int low = 0, high = n - 1, mid;
14     while(low <= high) {
15         mid = (low + high) / 2;
16         if(arr[mid] == key)
17             return mid; // Element found
18         else if(arr[mid] < key)
19             low = mid + 1;
20         else
21             high = mid - 1;
22     }
23     return -1; // Element not found
24
25 // Function to sort array (needed for binary search)
26 void sortArray(int arr[], int n) {
27     int temp;
28     for(int i = 0; i < n - 1; i++)
29         for(int j = 0; j < n - i - 1; j++)
30             if(arr[j] > arr[j + 1]) {
31                 temp = arr[j];
32                 arr[j] = arr[j + 1];
33                 arr[j + 1] = temp;
34             }
35 }
36
37 int main() {
38     int arr[100], n, key, result;
39     printf("Enter number of elements: ");
40     scanf("%d", &n);
41     printf("Enter %d elements:\n", n);
42     for(int i = 0; i < n; i++)
43         scanf("%d", &arr[i]);
44     printf("Enter element to search: ");
45     scanf("%d", &key);
46     // Linear Search
47     result = linearSearch(arr, n, key);
48     if(result != -1)
49         printf("Linear Search: Element %d found at index %d\n", key, result);
50     else
51         printf("Linear Search: Element %d not found\n", key);
52     // Binary Search (sort first)
53     sortArray(arr, n);
54     result = binarySearch(arr, n, key);
55     if(result != -1)
56         printf("Binary Search: Element %d found at index %d (after sorting)\n", key, result);
57     else
58         printf("Binary Search: Element %d not found\n", key);
59     return 0;
60 }
Line: 72 Col: 1 Sel: 0 Lines: 72 Length: 1884 Insert Done parsing in 0.031 seconds
```

```
C:\Users\wshn\c\djdj.exe
Enter number of elements: 5
Enter 5 elements:
45 22 88 16 37
Enter element to search: 88
Linear Search: Element 88 found at index 2
Binary Search: Element 88 found at index 4 (after sorting)

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Process exited after 19.97 seconds with return value 0
Press any key to continue . . .
```

```
C:\Users\vishn\c\djdj.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(globals)
djdj.cpp
1 #include <stdio.h>
2
3 int main() {
4     int arr[100], n;
5
6     // Input size
7     printf("Enter the number of elements in the array: ");
8     scanf("%d", &n);
9
10    // Check if we can access the 5th element
11    if (n < 5) {
12        printf("Array does not have 5 elements.\n");
13        return 1;
14    }
15
16    // Input elements
17    printf("Enter %d elements:\n", n);
18    for (int i = 0; i < n; i++) {
19        scanf("%d", &arr[i]);
20    }
21
22    // Display 5th element (index 4)
23    printf("The 5th iterated element is: %d\n", arr[4]);
24
25    return 0;
26 }
27
```

```
C:\Users\vishn\c\djdj.exe
Enter the number of elements in the array: 7
Enter 7 elements:
12 24 36 48 60 72 84
The 5th iterated element is: 60

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Process exited after 23.63 seconds with return value 0
Press any key to continue . . .
```



```
C:\Users\vishn\c\sdbhf.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(globals)
sdbhf.cpp
1  #include <stdio.h>
2
3  int main() {
4      int arr[100], n, i, sum = 0, expectedSum, missing;
5
6      printf("Enter the value of n (size should be n-1 elements): ");
7      scanf("%d", &n); // n is the range 1 to n
8
9      printf("Enter %d elements (from 1 to %d, one missing):\n", n - 1, n);
10     for (i = 0; i < n - 1; i++) {
11         scanf("%d", &arr[i]);
12         sum += arr[i];
13     }
14
15     expectedSum = n * (n + 1) / 2;
16     missing = expectedSum - sum;
17
18     printf("The missing element is: %d\n", missing);
19
20     return 0;
21 }
22
```

```
C:\Users\vishn\c\sdbhf.exe
Enter the value of n (size should be n-1 elements): 6
Enter 5 elements (from 1 to 6, one missing):
1 2 3 5 6
The missing element is: 4

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Process exited after 21.02 seconds with return value 0
Press any key to continue . . .
```

```
CA\Users\vishn\c\djdj.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(globals)
djdj.cpp
1  #include <stdio.h>
2
3  int main() {
4      int arr1[100], arr2[100], result[200];
5      int n1, n2, i, k = 0;
6
7      // Input size and elements of first array
8      printf("Enter number of elements in first array: ");
9      scanf("%d", &n1);
10     printf("Enter elements of first array:\n");
11     for(i = 0; i < n1; i++) {
12         scanf("%d", &arr1[i]);
13         result[k++] = arr1[i]; // Copy to result
14     }
15
16     // Input size and elements of second array
17     printf("Enter number of elements in second array: ");
18     scanf("%d", &n2);
19     printf("Enter elements of second array:\n");
20     for(i = 0; i < n2; i++) {
21         scanf("%d", &arr2[i]);
22         result[k++] = arr2[i]; // Copy to result
23     }
24
25     // Display concatenated array
26     printf("Concatenated array:\n");
27     for(i = 0; i < k; i++) {
28         printf("%d ", result[i]);
29     }
30     printf("\n");
31
32     return 0;
33 }
34
```

```
C:\Users\vishn\c\djdj.exe
Enter number of elements in first array: 3
Enter elements of first array:
1 2 3
Enter number of elements in second array: 4
Enter elements of second array:
4 5 6 7
Concatenated array:
1 2 3 4 5 6 7

-----
Process exited after 43.12 seconds with return value 0
Press any key to continue . . .
```