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insertion sort in c

Insertion sort in c: c program for insertion sort to sort numbers. This code implements insertion sort algorithm to arrange numbers of an array in ascending order. With a little modification it will arrange numbers in descending order.

Insertion sort algorithm implementation in c

```
/* insertion sort ascending order */

#include <stdio.h>

int main()
{
  int n, array[1000], c, d, t;

  printf("Enter number of elements\n");
  scanf("%d", &n);

  printf("Enter %d integers\n", n);

  for (c = 0; c < n; c++) {
    scanf("%d", &array[c]);
  }
```

```c
for (c = 1 ; c <= n - 1; c++) {
    d = c;

    while ( d > 0 && array[d] < array[d-1]) {
      t          = array[d];
      array[d]   = array[d-1];
      array[d-1] = t;

      d--;
    }
  }

  printf("Sorted list in ascending order:\n");

  for (c = 0; c <= n - 1; c++) {
    printf("%d\n", array[c]);
  }

  return 0;
}
```

Compiler used: GCC

Output of program:

```
Enter number of elements
5
Enter 5 integers
4
1
-2
8
3
Sorted list in ascending order:
-2
1
3
4
8


Process returned 0 (0x0)    execution time : 11.527 s
Press ENTER to continue.
```

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