

```
// Java code for linearly search x in arr[]. If x
// is present then return its location, otherwise
// return -1
```

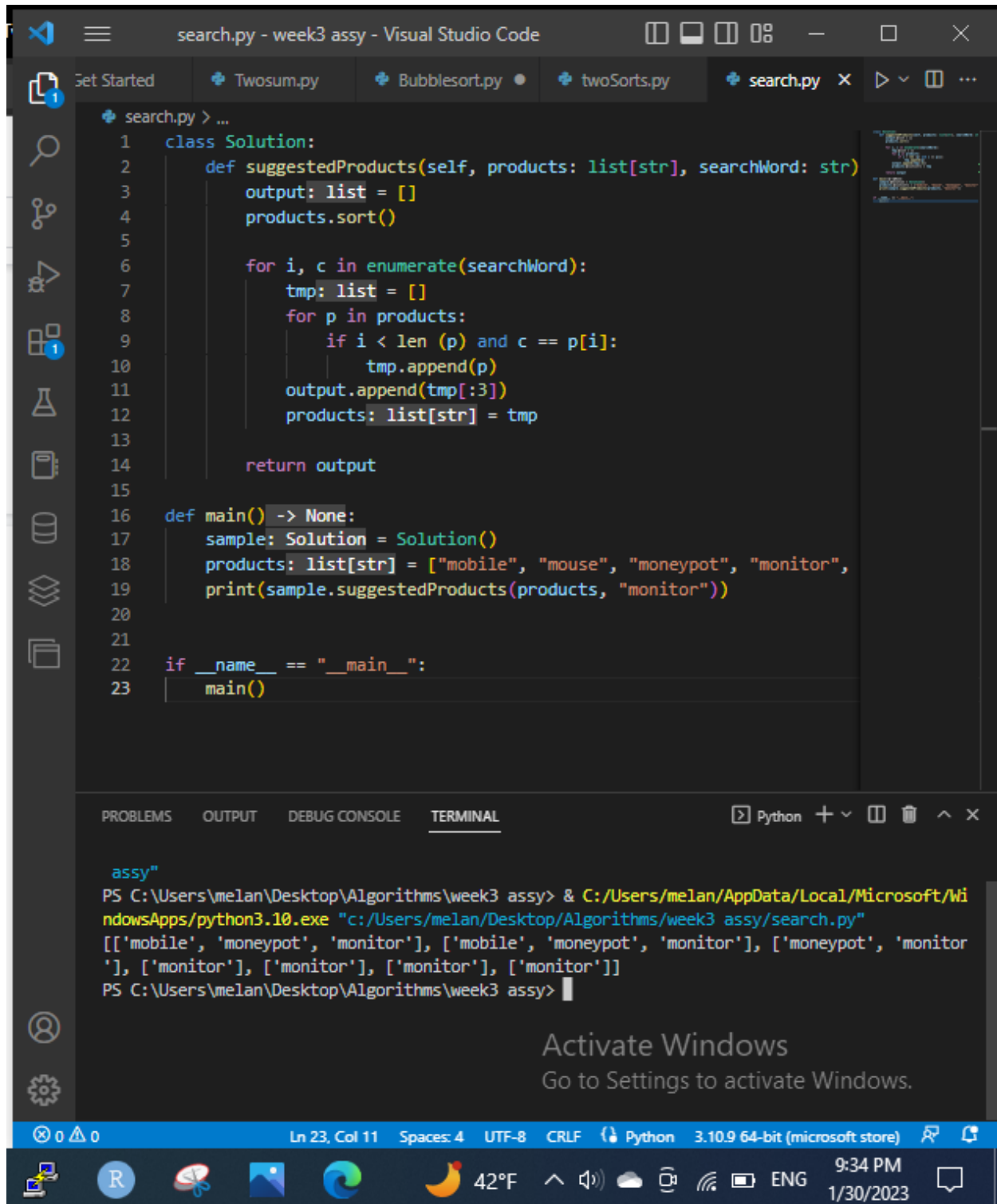
```
class GFG
{
    public static int search(int arr[], int x)
    {
        int n = arr.length;
        for(int i = 0; i < n; i++) // O(N)
        {
            if(arr[i] == x)
                return i;
        }
        return -1;
    }

    public static void main(String args[])
    {
        int arr[] = { 2, 3, 4, 10, 40 };
        int x = 10;

        int result = search(arr, x);
        if(result == -1)
            System.out.print("Element is not present in array");
        else
            System.out.print("Element is present at index " + result);
    }
}
```

BIG O = O(N)

OPTIONAL:



The screenshot shows the Visual Studio Code editor with a file named `search.py` open. The code defines a `Solution` class with a `suggestedProducts` method and a `main` function. The `suggestedProducts` method takes a list of products and a search word, sorts the products, and returns a list of suggested products. The `main` function creates a `Solution` object, sets the products to `["mobile", "mouse", "moneypot", "monitor"]`, and prints the result of `suggestedProducts(products, "monitor")`.

```
1 class Solution:
2     def suggestedProducts(self, products: list[str], searchWord: str)
3         output: list = []
4         products.sort()
5
6         for i, c in enumerate(searchWord):
7             tmp: list = []
8             for p in products:
9                 if i < len(p) and c == p[i]:
10                     tmp.append(p)
11             output.append(tmp[:3])
12             products: list[str] = tmp
13
14         return output
15
16 def main() -> None:
17     sample: Solution = Solution()
18     products: list[str] = ["mobile", "mouse", "moneypot", "monitor",
19     print(sample.suggestedProducts(products, "monitor"))
20
21
22 if __name__ == "__main__":
23     main()
```

The terminal output shows the execution of the script:

```
assy"
PS C:\Users\melan\Desktop\Algorithms\week3 assy> & C:/Users/melan/AppData/Local/Microsoft/WindowsApps/python3.10.exe "c:/Users/melan/Desktop/Algorithms/week3 assy/search.py"
[['mobile', 'moneypot', 'monitor'], ['mobile', 'moneypot', 'monitor'], ['moneypot', 'monitor'], ['monitor'], ['monitor'], ['monitor'], ['monitor']]
PS C:\Users\melan\Desktop\Algorithms\week3 assy>
```

The status bar at the bottom indicates the file is at line 23, column 11, with 4 spaces, UTF-8 encoding, CRLF line endings, and Python 3.10.9 64-bit (microsoft store) interpreter.