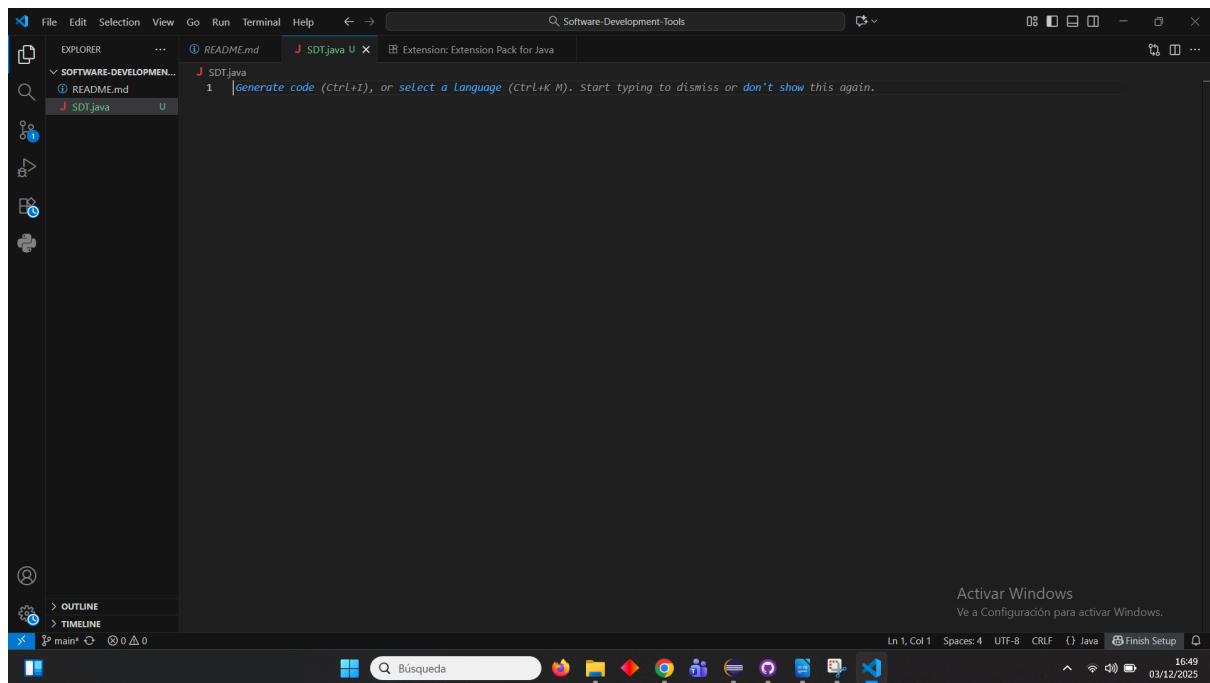


Software Development Tools

Task 2

Álvaro Nicolás Yepes

a-c)



d)

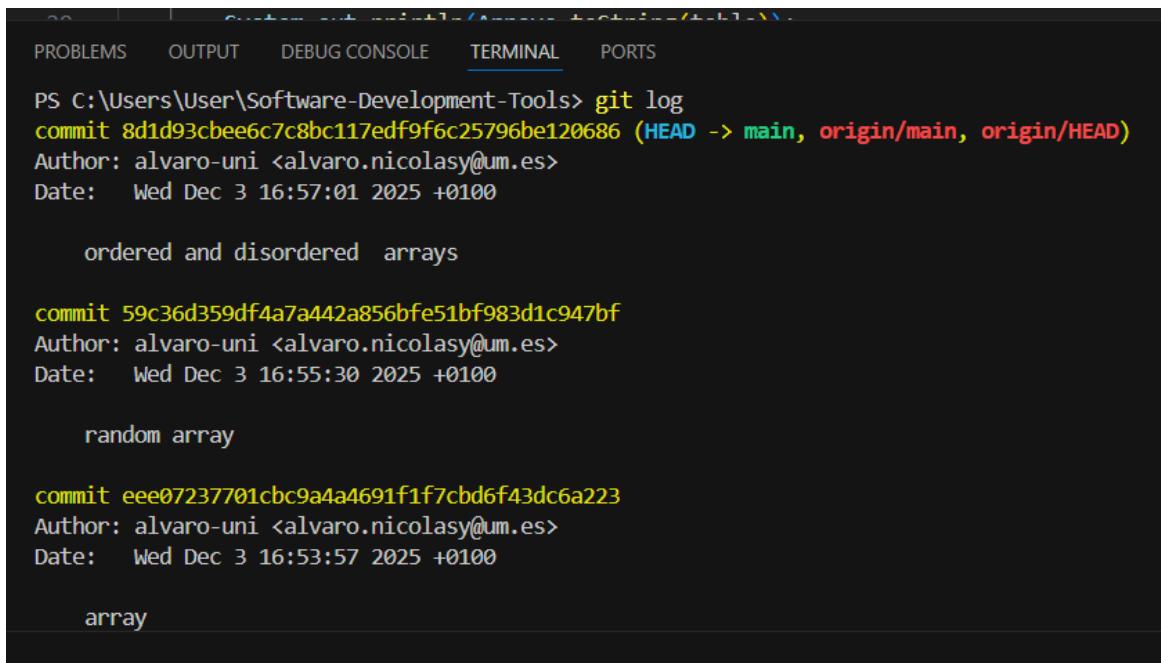
This screenshot shows the Software-Development-Tools interface with the Terminal tab active. The terminal window displays the following git commands and output:

```
nothing added to commit but untracked files present (use "git add" to track)
PS C:\Users\User\Software-Development-Tools> git add .
PS C:\Users\User\Software-Development-Tools> git commit -m "empty project"
[main 61b1206] empty project
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 SDT.java
PS C:\Users\User\Software-Development-Tools> git push
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 16 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 276 bytes | 276.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To github.com:alvaro-uni/Software-Development-Tools.git
  f8d77e1..61b1206 main -> main
PS C:\Users\User\Software-Development-Tools>
```

e-j)

```
PS C:\Users\User\Software-Development-Tools> git add .
PS C:\Users\User\Software-Development-Tools> git commit -m "array"
[main eee0723] array
 2 files changed, 21 insertions(+)
  create mode 100644 .project
PS C:\Users\User\Software-Development-Tools> git add .
PS C:\Users\User\Software-Development-Tools> git commit -m "random array"
[main 59c36d3] random array
 1 file changed, 10 insertions(+), 2 deletions(-)
PS C:\Users\User\Software-Development-Tools> git add .
PS C:\Users\User\Software-Development-Tools> git commit -m "ordered and disordered arrays"
[main 8d1d93c] ordered and disordered arrays
 1 file changed, 9 insertions(+), 5 deletions(-)
PS C:\Users\User\Software-Development-Tools> git push
Enumerating objects: 12, done.
Counting objects: 100% (12/12), done.
Delta compression using up to 16 threads
Compressing objects: 100% (10/10), done.
Writing objects: 100% (10/10), 1.24 KiB | 181.00 KiB/s, done.
Total 10 (delta 4), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (4/4), done.
To github.com:alvaro-uni/Software-Development-Tools.git
 61b1206..8d1d93c main -> main
a: Activating...
```

k)



The screenshot shows a terminal window within a code editor interface. The tabs at the top are PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL, and PORTS. The TERMINAL tab is selected. The command `git log` has been run, and the output is displayed:

```
PS C:\Users\User\Software-Development-Tools> git log
commit 8d1d93cbee6c7c8bc117edf9f6c25796be120686 (HEAD -> main, origin/main, origin/HEAD)
Author: alvaro-uni <alvaro.nicolasy@um.es>
Date:   Wed Dec 3 16:57:01 2025 +0100

    ordered and disordered arrays

commit 59c36d359df4a7a442a856bfe51bf983d1c947bf
Author: alvaro-uni <alvaro.nicolasy@um.es>
Date:   Wed Dec 3 16:55:30 2025 +0100

    random array

commit eee07237701cbc9a4a4691f1f7cbd6f43dc6a223
Author: alvaro-uni <alvaro.nicolasy@um.es>
Date:   Wed Dec 3 16:53:57 2025 +0100

    array
```

l)

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

8d1d93cb (alvaro-uni 2025-12-03 16:57:01 +0100 20)      System.out.println(Arrays.toString(table));
eee07237 (alvaro-uni 2025-12-03 16:53:57 +0100 21)    }
eee07237 (alvaro-uni 2025-12-03 16:53:57 +0100 22) }
PS C:\Users\User\Software-Development-Tools> git blame .\SDT.java
8d1d93cb (alvaro-uni 2025-12-03 16:57:01 +0100 1) import java.util.Arrays;
59c36d35 (alvaro-uni 2025-12-03 16:55:30 +0100 2) import java.util.Random;
59c36d35 (alvaro-uni 2025-12-03 16:55:30 +0100 3)
00000000 (Not Committed Yet 2025-12-03 17:00:49 +0100 4) public class SDT {
eee07237 (alvaro-uni 2025-12-03 16:53:57 +0100 5)     public static void main(String[] args) {
eee07237 (alvaro-uni 2025-12-03 16:53:57 +0100 6)
59c36d35 (alvaro-uni 2025-12-03 16:55:30 +0100 7)
59c36d35 (alvaro-uni 2025-12-03 16:55:30 +0100 8)
59c36d35 (alvaro-uni 2025-12-03 16:55:30 +0100 9)
59c36d35 (alvaro-uni 2025-12-03 16:55:30 +0100 10)
8d1d93cb (alvaro-uni 2025-12-03 16:57:01 +0100 11)
59c36d35 (alvaro-uni 2025-12-03 16:55:30 +0100 12)
59c36d35 (alvaro-uni 2025-12-03 16:55:30 +0100 13)
8d1d93cb (alvaro-uni 2025-12-03 16:57:01 +0100 14)
8d1d93cb (alvaro-uni 2025-12-03 16:57:01 +0100 15)
8d1d93cb (alvaro-uni 2025-12-03 16:57:01 +0100 16)
8d1d93cb (alvaro-uni 2025-12-03 16:57:01 +0100 17)
8d1d93cb (alvaro-uni 2025-12-03 16:57:01 +0100 18)
8d1d93cb (alvaro-uni 2025-12-03 16:57:01 +0100 19)
8d1d93cb (alvaro-uni 2025-12-03 16:57:01 +0100 20)
eee07237 (alvaro-uni 2025-12-03 16:53:57 +0100 21)    }
eee07237 (alvaro-uni 2025-12-03 16:53:57 +0100 22) }
PS C:\Users\User\Software-Development-Tools>
```

m)

```
1 import java.util.Random;
PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS

1 file changed, 1 insertion(+), 1 deletion(-)
PS C:\Users\User\Software-Development-Tools> git checkout 59c36d3
Note: switching to '59c36d3'.

You are in 'detached HEAD' state. You can look around, make experimental
changes and commit them, and you can discard any commits you make in this
state without impacting any branches by switching back to a branch.

You are in 'detached HEAD' state. You can look around, make experimental
changes and commit them, and you can discard any commits you make in this
state without impacting any branches by switching back to a branch.

If you want to create a new branch to retain commits you create, you may
do so (now or later) by using -c with the switch command. Example:
You are in 'detached HEAD' state. You can look around, make experimental
changes and commit them, and you can discard any commits you make in this
state without impacting any branches by switching back to a branch.

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If you want to create a new branch to retain commits you create, you may
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do so (now or later) by using -c with the switch command. Example:

git switch -c <new-branch-name>

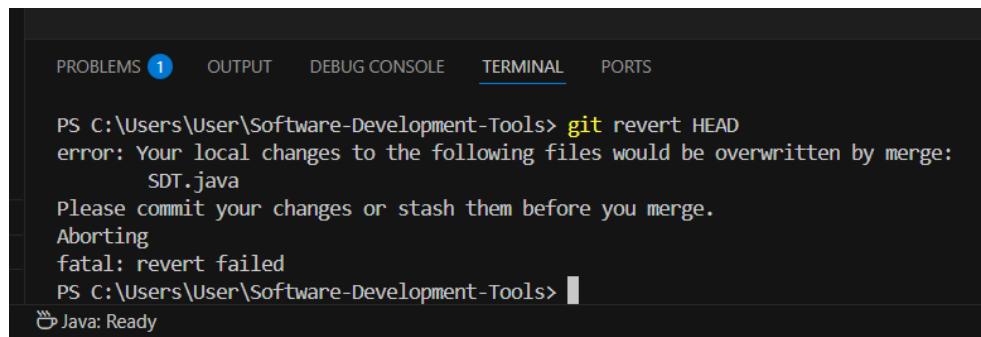
Or undo this operation with:

git switch -

Turn off this advice by setting config variable advice.detachedHead to false

HEAD is now at 59c36d3 random array
Java: Ready
```

m-o) Revert fails because it is used only for committed changes.

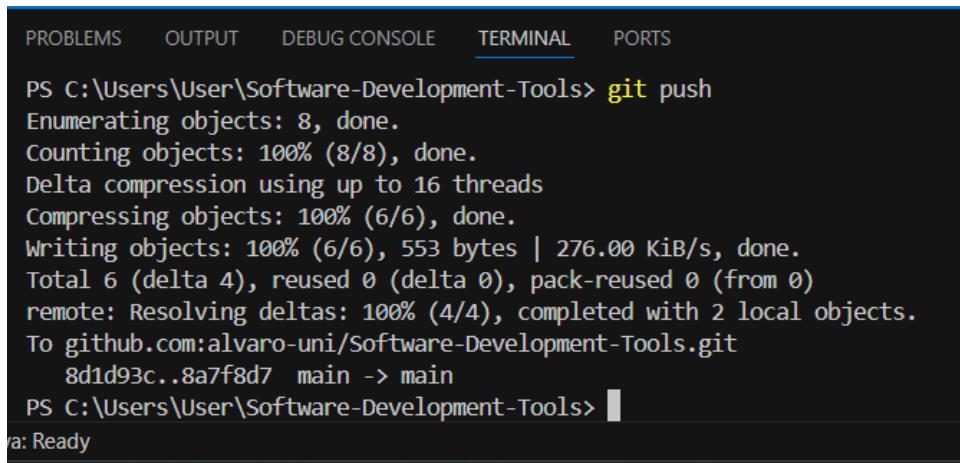


PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Users\User\Software-Development-Tools> git revert HEAD
error: Your local changes to the following files would be overwritten by merge:
      SDT.java
Please commit your changes or stash them before you merge.
Aborting
fatal: revert failed
PS C:\Users\User\Software-Development-Tools>
```

Java: Ready

p)

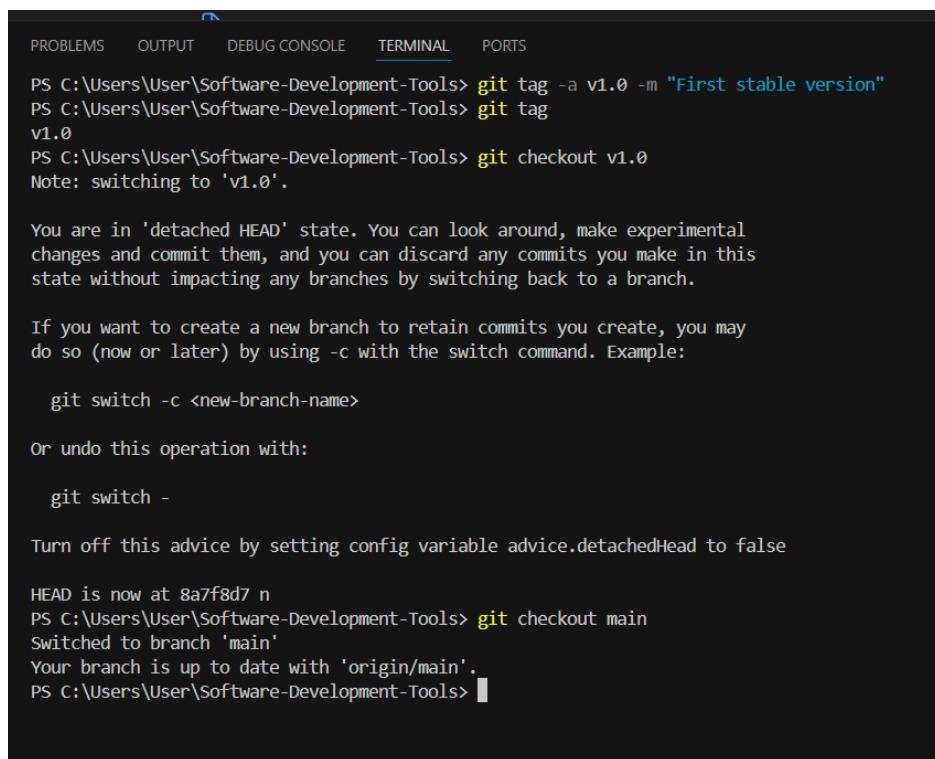


PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Users\User\Software-Development-Tools> git push
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 16 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (6/6), 553 bytes | 276.00 KiB/s, done.
Total 6 (delta 4), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (4/4), completed with 2 local objects.
To github.com:alvaro-uni/Software-Development-Tools.git
  8d1d93c..8a7f8d7  main -> main
PS C:\Users\User\Software-Development-Tools>
```

a: Ready

t)



PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Users\User\Software-Development-Tools> git tag -a v1.0 -m "First stable version"
PS C:\Users\User\Software-Development-Tools> git tag
v1.0
PS C:\Users\User\Software-Development-Tools> git checkout v1.0
Note: switching to 'v1.0'.
```

You are in 'detached HEAD' state. You can look around, make experimental changes and commit them, and you can discard any commits you make in this state without impacting any branches by switching back to a branch.

If you want to create a new branch to retain commits you create, you may do so (now or later) by using -c with the switch command. Example:

```
git switch -c <new-branch-name>
```

Or undo this operation with:

```
git switch -
```

Turn off this advice by setting config variable advice.detachedHead to false

```
HEAD is now at 8a7f8d7 n
PS C:\Users\User\Software-Development-Tools> git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
PS C:\Users\User\Software-Development-Tools>
```

u-w)

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

Or undo this operation with:

```
git switch -
```

Turn off this advice by setting config variable advice.detachedHead to false

```
HEAD is now at 8a7f8d7 n
PS C:\Users\User\Software-Development-Tools> git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
PS C:\Users\User\Software-Development-Tools>
PS C:\Users\User\Software-Development-Tools>
PS C:\Users\User\Software-Development-Tools> git branch sort-improve
PS C:\Users\User\Software-Development-Tools> git checkout sort-improve
Switched to branch 'sort-improve'
PS C:\Users\User\Software-Development-Tools>
```

x-y)

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS

Your branch is up to date with 'origin/main'.

```
PS C:\Users\User\Software-Development-Tools>
PS C:\Users\User\Software-Development-Tools>
PS C:\Users\User\Software-Development-Tools> git branch sort-improve
PS C:\Users\User\Software-Development-Tools> git checkout sort-improve
Switched to branch 'sort-improve'
PS C:\Users\User\Software-Development-Tools> git add .
PS C:\Users\User\Software-Development-Tools> git commit -m "improvement sort"
[sort-improve 8defc76] improvement sort
 1 file changed, 14 insertions(+), 1 deletion(-)
PS C:\Users\User\Software-Development-Tools> git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
PS C:\Users\User\Software-Development-Tools> git merge sort-improve
Updating 8a7f8d7..8defc76
Fast-forward
 SDT.java | 15 ++++++----+
 1 file changed, 14 insertions(+), 1 deletion(-)
PS C:\Users\User\Software-Development-Tools>
```

Java: Ready

z-z1)

The screenshot shows a terminal window with the following command history:

```
Your branch is up to date with 'origin/main'.
PS C:\Users\User\Software-Development-Tools>
PS C:\Users\User\Software-Development-Tools>
PS C:\Users\User\Software-Development-Tools> git branch sort-improve
PS C:\Users\User\Software-Development-Tools> git checkout sort-improve
Switched to branch 'sort-improve'
PS C:\Users\User\Software-Development-Tools> git add .
PS C:\Users\User\Software-Development-Tools> git commit -m "improvement sort"
[sort-improve 8defc76] improvement sort
  1 file changed, 14 insertions(+), 1 deletion(-)
PS C:\Users\User\Software-Development-Tools> git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
PS C:\Users\User\Software-Development-Tools> git merge sort-improve
Updating 8a7f8d7..8defc76
Fast-forward
  SDT.java | 15 ++++++++-----
  1 file changed, 14 insertions(+), 1 deletion(-)
PS C:\Users\User\Software-Development-Tools>
```

Java: Ready

z2-z3)

The screenshot shows a code editor with the following code snippet:

```
12   }
13
14     Accept Current Change | Accept Incoming Change | Accept Both Changes | Compare Changes
15   <<<<< HEAD (Current Change)
16   =====
17   System.out.println("Showing disordered array :");
18 >>>> 2d5818710c0e8749d10c4df5ba1e3d773edge326 (Incoming Change)
19   System.out.println(Arrays.toString(table));
20
21   bubblesort(table);
```

A merge conflict is indicated between line 15 and line 18. The code editor interface includes a 'Resolve in Merge Editor' button.

PROBLEMS 3 OUTPUT DEBUG CONSOLE TERMINAL PORTS

! [rejected] main -> main (fetch first)
error: failed to push some refs to github.com:alvaro-uni/Software-Development-Tools.git'
hint: Updates were rejected because the remote contains work that you do not
hint: have locally. This is usually caused by another repository pushing to
hint: the same ref. If you want to integrate the remote changes, use
hint: 'git pull' before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.
PS C:\Users\User\Software-Development-Tools> git pull
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (1/1), done.
remote: Total 3 (delta 2), reused 3 (delta 2), pack-reused 0 (from 0)
Unpacking objects: 100% (3/3), 273 bytes | 17.00 KiB/s, done.
From github.com:alvaro-uni/Software-Development-Tools
 8a7f8d7..2d58187 main -> origin/main
Auto-merging SDT.java
CONFLICT (content): Merge conflict in SDT.java
Automatic merge failed; fix conflicts and then commit the result.
PS C:\Users\User\Software-Development-Tools>

Activar Windows
Ve a Configuración para activar Wind

Java: Ready

Ln 19, Col 1 Spaces: 4 UTF-8 CRLF {} Java F