

PES UNIVERSITY
AUGUST – DECEMBER 2022 SEMESTER 5
SOFTWARE ENGINEERING LAB TASKS

UNIT 3 LAB TASK

SUBMITTED BY

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PROBLEM STATEMENT 1:

Programming standards give your code a more uniform approach and enhance its testability. Keeping your project in mind, attempt the below questions:

Do you think Defensive Programming is applicable to your project?

Follow up: is Redundancy not applicable in the case where a single system is executing the program?

Yes, defensive will be used in our project as it would help with reducing bugs and problems with the functioning of the software, although the performance maybe worse and the code longer, it is safer. It is very much applicable because if the only system fails then there would be no other way to provide the service to the customers

As a developer, should we rely entirely on the user providing correct input? In your project, include statements to ensure that the program only continues with data is of the expected type

No, we should not rely entirely on the user providing correct input. We should have test cases and error handling methods included in the code. This is to ensure that there are no vulnerabilities or issues in the software.

While working on your project, the go to approach to debug is using print statements. Could you include these statements to highlight the location and values at the current point in the project?

Yes. It is easier to understand and debug faults / errors using print statements. It will be removed when our errors are rectified. This helps us to understand what the values are and how they change over time. Thus helping in understanding the problem properly and resolving the issue faster

Could you build two valid and invalid test cases for any two functions in your project?

Yes. Some test cases could be assessing model predictions with RMSE values, check results on entering valid User Id and Password, check results on entering Invalid User ID and Password, checking results on entering empty User ID and Password.

PROBLEM STATEMENT 3:

Configuration management helps maintain various versions of the project and eases promotion of new releases. With respect to your project, answer the below questions and explore the mentioned scenarios with git

- Build a table to separate all of your files on the project repository into configuration items
- Each team member should add/modify any of the configuration items on a separate branch
- Assuming your main branch to be the baseline, make further modifications on a different branch to indicate version of the project
- Promote a branch to the baseline by merging

Solution:

```
OUTPUT  TERMINAL  DEBUG CONSOLE
PS D:\College\Semester 5\Software Engineering> git clone https://github.com/Mitul-Joby/Stonkinator.git
Cloning into 'Stonkinator'...
remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (4/4), 12.49 KiB | 1.56 MiB/s, done.
PS D:\College\Semester 5\Software Engineering> cd .\Stonkinator\
PS D:\College\Semester 5\Software Engineering\Stonkinator> ls

Directory: D:\College\Semester 5\Software Engineering\Stonkinator

Mode                LastWriteTime         Length Name
----                -
-a----             18-Oct-22  10:09 PM           35823 LICENSE
-a----             18-Oct-22  10:09 PM             32 README.md

PS D:\College\Semester 5\Software Engineering\Stonkinator>
```

```
OUTPUT  TERMINAL  DEBUG CONSOLE
PS D:\College\Semester 5\Software Engineering\Stonkinator> git log
commit bbf8c53ff923525015be3e5f5991a41957b5f (HEAD -> main, origin/main, origin/HEAD)
Author: Mitul Joby <73733877+Mitul-Joby@users.noreply.github.com>
Date:   Tue Oct 18 13:44:30 2022 +0530

    Initial commit

PS D:\College\Semester 5\Software Engineering\Stonkinator> git status
On branch main
Your branch is up to date with 'origin/main'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    Documentation/

nothing added to commit but untracked files present (use "git add" to track)
PS D:\College\Semester 5\Software Engineering\Stonkinator> git add .
PS D:\College\Semester 5\Software Engineering\Stonkinator> git status
On branch main
Your branch is up to date with 'origin/main'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   Documentation/StockPricePredictor-SRS.docx
    new file:   Documentation/StockPricePredictor-SRS.pdf
    new file:   Documentation/UML.png

PS D:\College\Semester 5\Software Engineering\Stonkinator> git commit -m "Added SRS documents"
[main 3584457] Added SRS documents
 3 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 Documentation/StockPricePredictor-SRS.docx
 create mode 100644 Documentation/StockPricePredictor-SRS.pdf
 create mode 100644 Documentation/UML.png
PS D:\College\Semester 5\Software Engineering\Stonkinator>
```



```

PS D:\College\Semester 5\Software Engineering\Stonkinator> git branch
* Mitul
  main
PS D:\College\Semester 5\Software Engineering\Stonkinator> git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
PS D:\College\Semester 5\Software Engineering\Stonkinator> git branch
Mitul
* main
PS D:\College\Semester 5\Software Engineering\Stonkinator> git status
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean
PS D:\College\Semester 5\Software Engineering\Stonkinator> git log
commit 3584457c1a632184df907114ced2453e5d19bb2d (HEAD -> main, origin/main, origin/HEAD)
Author: Mitul Joby <73733877+Mitul-Joby@users.noreply.github.com>
Date: Tue Oct 18 22:13:11 2022 +0530

    Added SRS documents

commit bbf8c53ff923525025015be3e5f5991a41957b5f
Author: Mitul Joby <73733877+Mitul-Joby@users.noreply.github.com>
Date: Tue Oct 18 13:44:30 2022 +0530

    Initial commit
PS D:\College\Semester 5\Software Engineering\Stonkinator>

```

```

PS D:\College\Semester 5\Software Engineering\Stonkinator> git merge Mitul
Updating 3584457..2a9949c
Fast-forward
 src/main.py | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 src/main.py
PS D:\College\Semester 5\Software Engineering\Stonkinator> git log
commit 2a9949c6dd5d69a91fc8d3c355b6b38574f84de7 (HEAD -> main, origin/Mitul, Mitul)
Author: Mitul Joby <73733877+Mitul-Joby@users.noreply.github.com>
Date: Tue Oct 18 22:20:42 2022 +0530

    Created main.py

commit 3584457c1a632184df907114ced2453e5d19bb2d (origin/main, origin/HEAD)
Author: Mitul Joby <73733877+Mitul-Joby@users.noreply.github.com>
Date: Tue Oct 18 22:13:11 2022 +0530

    Added SRS documents

commit bbf8c53ff923525025015be3e5f5991a41957b5f
Author: Mitul Joby <73733877+Mitul-Joby@users.noreply.github.com>
Date: Tue Oct 18 13:44:30 2022 +0530

    Initial commit
PS D:\College\Semester 5\Software Engineering\Stonkinator> git push
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Mitul-Joby/Stonkinator.git
 3584457..2a9949c main -> main
PS D:\College\Semester 5\Software Engineering\Stonkinator>

```

```

PowerShell
Mihir@LAPTOP-1HOTAKVA: Stnkinator %main% > pwsh git checkout -b Mihir
Switched to a new branch 'Mihir'

Mihir@LAPTOP-1HOTAKVA: Stnkinator %Mihir% > pwsh git status
On branch Mihir
Changes not staged for commit:
  (use "git add <file> ..." to update what will be committed)
  (use "git restore <file> ..." to discard changes in working directory)
        modified:   src/main.py

no changes added to commit (use "git add" and/or "git commit -a")

Mihir@LAPTOP-1HOTAKVA: Stnkinator %Mihir% > pwsh git add .
Mihir@LAPTOP-1HOTAKVA: Stnkinator %Mihir% > pwsh git status
On branch Mihir
Changes to be committed:
  (use "git restore --staged <file> ..." to unstage)
        modified:   src/main.py

Mihir@LAPTOP-1HOTAKVA: Stnkinator %Mihir% > pwsh git commit -m "modified main.py"
[Mihir 1dd6604] modified main.py
1 file changed, 2 insertions(+), 1 deletion(-)

```

```
PowerShell
Mihir@LAPTOP-1HOTAKVA: ~$ git push --set-upstream origin Mihir
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 16 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 336 bytes | 336.00 KiB/s, done.
Total 4 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
remote:
remote: Create a pull request for 'Mihir' on GitHub by visiting:
remote:   https://github.com/Mitul-Joby/Stonkinator/pull/new/Mihir
remote:
To https://github.com/Mitul-Joby/Stonkinator.git
 * [new branch]      Mihir -> Mihir
branch 'Mihir' set up to track 'origin/Mihir'.

C:\Users\navya\Desktop\PES\SE\Stonkinator>git checkout -b navyae
Switched to a new branch 'navyae'

C:\Users\navya\Desktop\PES\SE\Stonkinator>git status
On branch navyae
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   src/model.py

no changes added to commit (use "git add" and/or "git commit -a")

C:\Users\navya\Desktop\PES\SE\Stonkinator>git add .

C:\Users\navya\Desktop\PES\SE\Stonkinator>git status
On branch navyae
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   src/model.py

C:\Users\navya\Desktop\PES\SE\Stonkinator>git commit -m "modified model.py"
[navyae 50f9eae] modified model.py
1 file changed, 2 insertions(+), 1 deletion(-)

C:\Users\navya\Desktop\PES\SE\Stonkinator>git status
On branch navyae
nothing to commit, working tree clean

C:\Users\navya\Desktop\PES\SE\Stonkinator>git push --set-upstream origin navyae
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 16 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (4/4), 404 bytes | 134.00 KiB/s, done.
Total 4 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
remote:
remote: Create a pull request for 'navyae' on GitHub by visiting:
remote:   https://github.com/Mitul-Joby/Stonkinator/pull/new/navyae
remote:
To https://github.com/Mitul-Joby/Stonkinator.git
 * [new branch]      navyae -> navyae
branch 'navyae' set up to track 'origin/navyae'.
```



```
C:\Users\navya\Desktop\PES\SE\Stonkinator>git merge navyae
Updating 600f0da..50f9eae
Fast-forward
 src/model.py | 3 ++-
 1 file changed, 2 insertions(+), 1 deletion(-)
```

```
C:\Users\noelj\OneDrive\Desktop\pes\sem5\software engineering\project\Stonkinator\Stonkinator>git checkout -b Noel
Switched to a new branch 'Noel'
```

```
C:\Users\noelj\OneDrive\Desktop\pes\sem5\software engineering\project\Stonkinator\Stonkinator>git status
On branch Noel
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   src/model.py
```

```
Untracked files:
  (use "git add <file>..." to include in what will be committed)
  Documentation/SE-Unit2Task.pdf
```

```
C:\Users\noelj\OneDrive\Desktop\pes\sem5\software engineering\project\Stonkinator\Stonkinator>git commit -m "created model.py"
[Noel 600f0da] created model.py
 1 file changed, 1 insertion(+)
 create mode 100644 src/model.py
```

```
C:\Users\noelj\OneDrive\Desktop\pes\sem5\software engineering\project\Stonkinator\Stonkinator>git status
On branch Noel
Untracked files:
  (use "git add <file>..." to include in what will be committed)
  Documentation/SE-Unit2Task.pdf
```

nothing added to commit but untracked files present (use "git add" to track)

```
C:\Users\noelj\OneDrive\Desktop\pes\sem5\software engineering\project\Stonkinator\Stonkinator>git log
commit 600f0da4fe5a41464e3df8f1e1e72a7cb7ecd290 (HEAD -> Noel)
Author: NoelJacobAbraham <noelja2001@gmail.com>
Date: Tue Oct 18 22:43:18 2022 +0530

    created model.py
```

```
C:\Users\noelj\OneDrive\Desktop\pes\sem5\software engineering\project\Stonkinator\Stonkinator>git push --set-upstream origin Noel
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 8 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (4/4), 398 bytes | 398.00 KiB/s, done.
Total 4 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
remote:
remote: Create a pull request for 'Noel' on GitHub by visiting:
remote:   https://github.com/Mitul-Joby/Stonkinator/pull/new/Noel
remote:
To https://github.com/Mitul-Joby/Stonkinator.git
 * [new branch]      Noel -> Noel
branch 'Noel' set up to track 'origin/Noel'.
```

```
C:\Users\noelj\OneDrive\Desktop\pes\sem5\software engineering\project\Stonkinator\Stonkinator>git status
On branch Noel
Your branch is up to date with 'origin/Noel'.
```

```
Untracked files:
  (use "git add <file>..." to include in what will be committed)
  Documentation/SE-Unit2Task.pdf
```

nothing added to commit but untracked files present (use "git add" to track)

```
C:\Users\noelj\OneDrive\Desktop\pes\sem5\software engineering\project\Stonkinator\Stonkinator>git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
```

```
C:\Users\noelj\OneDrive\Desktop\pes\sem5\software engineering\project\Stonkinator\Stonkinator>git merge Noel
Updating 2a9949c..600f0da
Fast-forward
 src/model.py | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 src/model.py
```

```
C:\Users\noelj\OneDrive\Desktop\pes\sem5\software engineering\project\Stonkinator\Stonkinator>git log
commit 600f0da4fe5a41464e3df8f1e1e72a7cb7ecd290 (HEAD -> main, origin/Noel, Noel)
Author: NoelJacobAbraham <noelja2001@gmail.com>
Date: Tue Oct 18 22:43:18 2022 +0530
```

```
PowerShell
Mihir@LAPTOP-1HOTAKVA: Stonkinator /main > .\pwsh git merge Mihir
Updating 2a9949c..1dd6604
Fast-forward
 src/main.py | 3 ++-
 1 file changed, 2 insertions(+), 1 deletion(-)

PS D:\College\Semester 5\Software Engineering\Stonkinator> git log
commit 7d2474701704845d3fc999c9a87e32094027c86a (HEAD -> main, origin/main, origin/HEAD)
Merge: 1dd6604 50f9eae
Author: Mihir Jayaprakash <mihirjayaprakash@gmail.com>
Date: Tue Oct 18 22:51:33 2022 +0530

    Merge branch 'main' of https://github.com/Mitul-Joby/Stonkinator

commit 50f9eae218b5d393d74942dd6aaf2e18df240390 (origin/navyae)
Author: NavyaeG <navyae.goyal@gmail.com>
Date: Tue Oct 18 22:47:40 2022 +0530

    modified model.py

commit 600f0da4fe5a41464e3df8f1e1e72a7cb7ecd290 (origin/Noel)
Author: NoellJacobAbraham <noelja2001@gmail.com>
Date: Tue Oct 18 22:43:18 2022 +0530

    created model.py

commit 1dd66040b858292e3f501307e1687c05766d5308 (origin/Mihir)
Author: Mihir Jayaprakash <mihirjayaprakash@gmail.com>
Date: Tue Oct 18 22:36:23 2022 +0530

    modified main.py

commit 2a9949c6dd5d69a91fc8d3c355b6b38574f84de7 (origin/Mitul, Mitul)
Author: Mitul Joby <73733877+Mitul-Joby@users.noreply.github.com>
Date: Tue Oct 18 22:20:42 2022 +0530

    Created main.py
```