CSCI 3901

Software Development Concepts

Faculty of Computer Science

Lab 4: "VERSION CONTROL"

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Part - 01

How many commits are there?

- There are 9 commits.

What is the commit message associated with the most recent commit?

- Commit Message: "Whoops, forgot to ignore class files"

Which Commit added the basePrices static variable?

- Commit id: b590e9d
- Commit Message: "Factored prices into an array"

- ## How many branches are there?
- There are in total 4 branches:
    - Local (Master) branch
    - Three remote branch:
        1. Remote/origin/HEAD
        2. Remote/origin/coupon
        3. Remote/origin/master

Which is the last commit on the coupons branch?

- Commit id: 67ba33edfb465babbbae8d1cbe43cb4c78583cfe
- Commit Message: "Added coupon feature"

Part - 02

Final output of git log


```
Dhruv@Dhruv MINGW64 /d/Dalhousie/CSCI-3901/Lab5/HfxDonairExpress (master)
$ git log
commit c1491d6550acd8eec4522c8afa27ba66b97cbe38 (HEAD -> master)
Author: dhruv <dhruv@dhruv.com>
Date:   Fri Feb 12 14:52:12 2021 +0530

    Bug fixes as mentioned in part2

commit 12e89aaa89bc6fec5195fbb6d161257a3bf9d7a1 (origin/master, origin/HEAD)
Author: Matt Amy <matt.e.amy@gmail.com>
Date:   Mon Feb 8 22:22:11 2021 -0400

    Whoops, forgot to ignore class files

commit 7d9c8c67d30a83451c8f8b506193b1222b4227f6
Author: Matt Amy <matt.e.amy@gmail.com>
Date:   Mon Feb 8 22:21:11 2021 -0400

    Modified coupon calculation

commit 0e585963d85819988f96962f1129c1722e4884ab
Merge: b97a7ab 67ba33e
Author: Matt Amy <matt.e.amy@gmail.com>
Date:   Mon Feb 8 22:14:55 2021 -0400

:...skipping...
commit c1491d6550acd8eec4522c8afa27ba66b97cbe38 (HEAD -> master)
Author: dhruv <dhruv@dhruv.com>
Date:   Fri Feb 12 14:52:12 2021 +0530

    Bug fixes as mentioned in part2

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    Modified coupon calculation

commit 0e585963d85819988f96962f1129c1722e4884ab
Merge: b97a7ab 67ba33e
Author: Matt Amy <matt.e.amy@gmail.com>
Date:   Mon Feb 8 22:14:55 2021 -0400

    Merge branch 'coupons'

commit 67ba33edfb465babbbae8d1cbe43cb4c78583cfe (origin/coupons)
Author: Matt Amy <matt.e.amy@gmail.com>
Date:   Mon Feb 8 22:14:23 2021 -0400

    Added coupon feature

commit b97a7abe80951ec455c8862e79b9d186192c8fc1
Author: Matt Amy <matt.e.amy@gmail.com>
Date:   Mon Feb 8 22:13:02 2021 -0400

    Bugfix - case statement falls through

commit 9f2ec80d481be947b798d4a56caba5b2835440b6
Author: Matt Amy <matt.e.amy@gmail.com>
Date:   Mon Feb 8 22:10:23 2021 -0400

    Added ability to purchase toppings

commit b590e9d454004f89a1af65c09295ea4c0f896171
Author: Matt Amy <matt.e.amy@gmail.com>
Date:   Mon Feb 8 22:07:25 2021 -0400

    Factored prices into an array

commit ae22dfe708764c39b7b52ba293eedc195a0cb96e
Author: Matt Amy <matt.e.amy@gmail.com>
Date:   Mon Feb 8 22:06:26 2021 -0400

    Basic functionality working

commit 5e6d1a8a44fdbcc9465573c43ad1a2b19dd57225
Author: Matt Amy <matt.e.amy@gmail.com>
Date:   Mon Feb 8 21:54:47 2021 -0400
```

```
    Factored prices into an array

commit ae22dfe708764c39b7b52ba293eedc195a0cb96e
Author: Matt Amy <matt.e.amy@gmail.com>
Date:   Mon Feb 8 22:06:26 2021 -0400

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commit 5e6d1a8a44fdbcc9465573c43ad1a2b19dd57225
Author: Matt Amy <matt.e.amy@gmail.com>
Date:   Mon Feb 8 21:54:47 2021 -0400

    Initial commit
(END)
```

Part - 03

Final output of git log

```
Dhruv@Dhruv MINGW64 /d/Dalhousie/CSCI-3901/Lab5/HfxDonairExpress (master)
$ git log
commit 002718048c3065748bd2549ff5e227e9eacf0839 (HEAD -> master, burger)
Author: dhruv <dhruv@dhruv.com>
Date:   Fri Feb 12 15:01:22 2021 +0530

    Adding burger menu

commit c1491d6550acd8eec4522c8afa27ba66b97cbe38
Author: dhruv <dhruv@dhruv.com>
Date:   Fri Feb 12 14:52:12 2021 +0530

    Bug fixes as mentioned in part2

commit 12e89aaa89bc6fec5195fbb6d161257a3bf9d7a1 (origin/master, origin/HEAD)
Author: Matt Amy <matt.e.amy@gmail.com>
Date:   Mon Feb 8 22:22:11 2021 -0400

    Whoops, forgot to ignore class files

commit 7d9c8c67d30a83451c8f8b506193b1222b4227f6
Author: Matt Amy <matt.e.amy@gmail.com>
Date:   Mon Feb 8 22:21:11 2021 -0400

    Modified coupon calculation

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Merge: b97a7ab 67ba33e
Author: Matt Amy <matt.e.amy@gmail.com>
Date:   Mon Feb 8 22:14:55 2021 -0400

    Merge branch 'coupons'

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Author: Matt Amy <matt.e.amy@gmail.com>
Date:   Mon Feb 8 22:14:23 2021 -0400

    Added coupon feature

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```
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Date:   Mon Feb 8 21:54:47 2021 -0400

    Initial commit
(END)
```

Questions

When working alone on a project, how frequently should you commit you code to a version control system? Explain why.

- When working alone on a project, one should practice committing to control system only when major change is applied to the code.
- Some of these changes includes – change of data structure, reorganizing code structure, change on logic, optimizing memory allocation, renaming important variables, adding new functionality.
- Someone is works alone is advised to commit such type changes when made to the system, as he/she is only responsible for the code to work.
- Suppose, when such changes are made to a particular functionality, it's possible that some other method, which relies on outcome of this code, may face issues and will not work as expected to be.
- In that case, assume one has made several changes and with each change, has commit to the control system. And after making those changes, when one tests the modified code at once and error occurs, that individual can easily check after which modification does the code become faulty and rollback to that version.

When working in a team, how frequently should you commit you code to a version control system? Explain why.

- When it comes to working on a project in a team, one must commit only after ensuring proper working of the added change and also he/she must ensure the existing functionalities does not break down due to the change made.
- Therefore, commit should be done functionality by functionality. So that other team members can better understand the added functionality as it would be hard to understand everything at once.

Why might you create branches for your project in your version control system?

- Branches are created so that we can test and verify the existing and the added changes effectively without worrying about main branch.
- After BVT (Build Verification Testing) of the new branch we can merge it to main branch ensuring reliability.