# Section 1 (Git)

1. The git clone command is used when you want to download an existing git repository to your local computer. This means that you will have a clone or copy of the git repository and can start working on it at your convenience. A git clone command is used on the cli, in this instance we will assume the original repository is on a remote server (github). After logging into github and copy url on the terminal input: git clone [***https://github.com/douglas/exampleproject.git***](https://github.com/douglas/exampleproject.git). Assuming that the dev branch already exists, after cloning we can then run ***git checkout dev***. If it does not exist then we can create and then switch to the new branch using ***git –b checkout dev***
2. To update a project locally from a remote repository we use the ***git pull*** command. This command will *fetch* repository and once that is done it will *merge* the two repos updating the local one. Once we update the local repo then we ***git add -> git commit*** then ***git push*** to remote branch.
3. Git add -> git commit -> git push
4. i.Open new folder that will contain project in cli

ii. Run git init on cli

iii. Now add some code into your project

iv. Run git add . (to add all files) on cli

v. run git commit in cli

vi. login to github on browser and create new repository and name it

vii. run git remote add origin (repo link)

viii. run git psuh origin master

1. A submodule in git is used when there is another project or third party library you want to use but keep separate from the current project instead of copying code. It allows you to keep a git repo as a subdirectory of another git repo. The main advantage of using submodules is it allows you to clone another repo in the project and keep commits separate

# Section 2 (Dependencies)

1. A dependency/package manager is a software system that makes it easy to install, configure and remove programs
2. Using node package manager the command is ***npm intall postgress –save***
3. Using node package manager the command to initialise dependencies is  ***npm init***  then ***npm install***

# Section 3 (Logic and development)

1. Undefined
2. Unit testing is a type of software testing where an individual component of a program is tested. This helps to isolate a piece of code and verify if it is working correctly. This could be a method or object and the aim is to make sure each unit of code is working as it should.
3. The main benefit of using abstraction is that it reduces complexity while increasing efficiency by removing all but object related data. Code becomes easily reusable and more secure since only relevant information is provided. Grouped classes makes it easier to read the code
4. The max on the order clause has to be removed, the statement is incoreect and the to\_char(to\_timestamp(ds.timestamp),’DD HH’) should be part of the selection clause. Also Orderby should come after Groupby

# Section 4 (Nodejs and Frameworks)

1. **i. Vue js**

This is a javascript framework (progressive) used to build single page applications and web interfaces. It is used for both desktop and mobile app development and uses spa development techniques such as Virtual Dom rendering, two way data binding and single file components

**ii. Nuxt js**

This is also a javascript framework however it is built on Vue.js with additional features such as server side rendering (to improve SEO), automatic routing and meta tags. Since vuejs is a spa, it always runs on the client side whilst nuxt.js runs on the server side. This being the key difference.

**iii. Veutify**

This is a UI framework for built on top of Vue.js (The angular material to angular framework). It is used to style Vue applications with easily customisable components that uses SASS variables

1. <https://github.com/Dougie1993/EpicDev>