**CMP73010 – Assignment 1 exercise**

Remember that this is a public repository so your changes will be seen by anyone who looks!

Add some comments about Version management after this line, or just add some text so there is a change to this file. Remember that your GitHub user id must be submitted in you assignment report!

>>> your stuff after this line >>>

# Microsoft Nightly Build System

With building Software systems, in continuous integration, a Microsoft build system generates executable components that are tested and deployed (Microsoft Corporation 2015). Basically, build systems provide feedback in the form of compilation errors and warnings (Microsoft Corporation 2014). Most of these errors are mostly caused by changes introduced into the project source. There is no guarantee that a nightly build will be available or will work, as a nightly build is just a build of what is currently checked into Microsoft’s source repository. and the automated build will make sure that everything compiles, and run the unit tests and any other automated tests that exist, then produce a final installer.   
  
The system basically functions as mentioned above and also offers the ability for programmers/ or groups of programmers the main ability to incorporate automated build processes.

The systems automated build process functions as follows:

* Updated/ latest versions of the project source code are taken from the Code repository
* After updated source code is obtained, it is then compiled
* Awaits compilation
* Scripts and Installer files are used to deploy the packages/ binary packages
* Project is deployed to for testing
* A server is used to carry out tests
* Build verification Tests are run
* After the BVTs are carried out, when successful, a detailed build report is obtained and published for members of the project
* Easy Compilation and Linking
* Test are ran automatically to prevent bugs

Advantages of Microsoft Nightly Build System

* 1. Reducing cost
  2. Maintains Single Source Repository, so easier for all programmers to get original code
  3. Make it easy for anyone to get the most recent executable.
  4. Customer feedback is much better
     + Customer uses last version
     + Customer sees working product (not specifications)
  5. Early delivery of critical parts of the system
     + Becomes useful much faster
  6. Programmers are always aware of the changes happening within the build

Disadvantages of the Build System:

1. System structure degrades as new “bits” added to the system
2. Builds have to accumulate before previous builds that are queued finish
3. Tracking progress becomes quite difficult

With the Microsoft Nightly build system, basically developers use the new features or bug fixes ahead of an official prerelease or final build of the new system (Microsoft Corporation 2015). Basically, Microsoft Nightly builds mean automated build that is mostly done once a day at the end of the working day for the developers (Microsoft Corporation 2015). The fact that automatic tests a run throughout the process, programmers don’t often worry about mistakes but rather concentrate mainly on the solution to possible bugs. Microsoft usually, comes about a release and the general public are made aware of the time of the release, with programmers often agreeing on and completing all objectives for a new system than it is released.

## References

1. Microsoft Corporation; Patent Issued for System for Hosted, Shared, Source Control Build. 2015. *Journal of Engineering,* , pp. 2879.  
   Viewed at 15 August 2016 online at : <http://search.proquest.com.ezproxy.scu.edu.au/docview/1658115082?accountid=16926&rfr_id=info%3Axri%2Fsid%3Aprimo>
2. Microsoft Corporation; Researchers Submit Patent Application, "System for Hosted, Shared, Source Control Build", for Approval. 2014. *Computer Weekly News,* , pp. 13492.

Viewed at 17 August 2016 online at:   
<http://search.proquest.com.ezproxy.scu.edu.au/docview/1475211881?accountid=16926&rfr_id=info%3Axri%2Fsid%3Aprimo>

#### Microsoft Websites

1. <https://msdn.microsoft.com/en-us/library/ee308011(v=vs.100).aspx#Build>
2. <https://msdn.microsoft.com/en-us/library/ee817676.aspx>

Baz changes