Course Code: CST8333

Course Name: Programming Language Research Project

Assignment Number: Assignment 3

Project: PPE Watchdog App.

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All material prepared for this assignment was produced by the author. Material from all third parties has been cited and referenced.

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1 Introduction

With the COVID-19 pandemic hitting the world hard on many levels, the healthcare management sector was on the focus. The capability of the health sector to cope with the pandemic consequences had to be continually enhanced. One of the earliest issues aroused from the beginning of the pandemic is lack of PPE (Personal Protective Equipment). Canada like many other countries was in shortage of masks, gloves, disinfecting and sterilization materials. My project aims at creating an inventory system watchdog that checks on the PPE contents of the warehouse of any health care facility like hospitals or outpatient clinics. Assuming that such an inventory was handled by excel sheets that are saved on the computer of one or many officers. The file may be handled asynchronously which results in inconsistency of data. So, our system will allow the facility to have one database that have the PPE data stored, and users will be able to access log-in web page or a GUI, being authenticated and then being permitted an access to a form handling the data to Create, Read, Update, or Delete records, each user upon the privilege assigned (Authorization).

Project Stakeholders

IT Department (adopting Agile)	End Users
SCRUM Master	Warehouse Managers at medical facilities (Medical Clinics & Hospitals)
Product Owner	HSE (Health, Safety & Environment) Officers at medical facilities (Medical Clinics & Hospitals)
Full Stack Developers	Procurement Managers at medical facilities (Medical Clinics & Hospitals)

1.1 Objectives

Table 1: Objectives and Business Outcomes

No.	OBJECTIVE	BUSINESS OUTCOME	MEASUREMENT CRITERIA
1	On the lower level of medical facilities like medical clinics & hospitals., the project aims at solving the problem of the unanticipated shortage of PPE in medical facilities.	Stakeholders of concern like, ▪ (HSE, Health, Safety & Environment) ▪ Procurement Officers ▪ Warehouse Managers They become able to anticipate an upcoming shortage of PPE gear. Based on data from inventory, procurement officers order new patch of PPE gear.	▪ Increment of preparedness for pandemics on the level of medical clinics & district hospitals. ▪ Reduction of gap times in which medical teams have no coverage of PPE gear. ▪ Reduction of infection rates of any epidemic or pandemic.

No.	OBJECTIVE	BUSINESS OUTCOME	MEASUREMENT CRITERIA
2	On the higher level of the province and country. The project aims at solving the problem of uncertainty about the strategic storage of PPE in the whole province or country.	Decision makers like provincial and federal health ministers have the proper inventory figures of PPE gear storage and the need for ordering the from outside the country or manufacturing them in local facilities.	▪ Increment of preparedness for pandemics on the provincial and federal and provincial level. ▪ Reduction of gap times in which medical teams have no coverage of PPE gear. ▪ Reduction of infection rates of any epidemic or pandemic.

1.2 Scope

Table 2: Project Scope

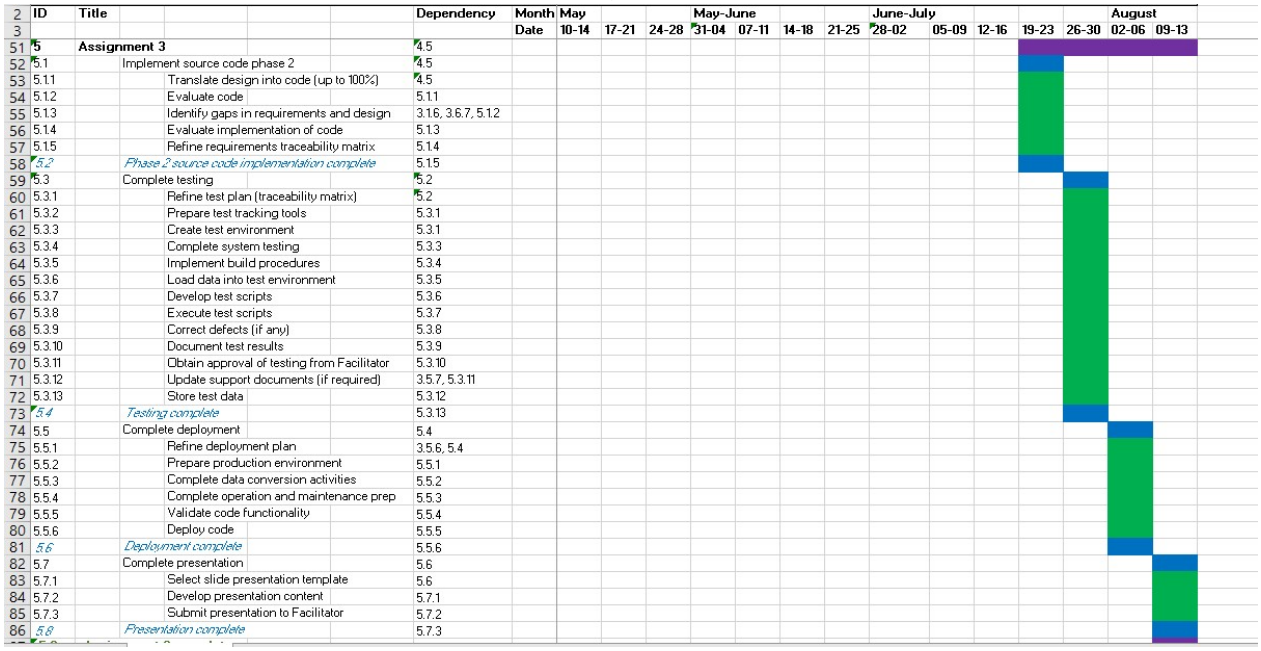
ACTIVITIES IN SCOPE	ACTIVITIES OUT OF SCOPE
	Choice of user type upon first access; either a system administrator or a regular user. A system administrator can perform the following. ▪ User Accounts Management (CRUD on User Accounts) ▪ CRUD on PPE inventory records ▪ Assigning roles to regular users
Sign-Up with Username & Password “Registration”	
Sign-In with Username & Password “User Authentication”	
	Password Recovery or “Forgot Password” Feature, the regular user can recover password by answering a security question.
	System Administrator can change her/his own password after the first entry. For privacy and security purposes.
	System administrator can assign different authorization levels or roles to regular users.

ACTIVITIES IN SCOPE	ACTIVITIES OUT OF SCOPE
	- User Authorization Different levels of CRUD (Create, read, update and delete) is granted to different users as per the following. ▪ Procurement Officer: Read, Update ▪ Warehouse Manager Create, Read, Update, Delete ▪ HSE (Health, safety & Environment Officer): Read
	System administrator can control user accounts by CRUD (creation, reading, updating, and deleting) any of regular user's accounts.
Regular users can perform CRUD (Create, Read, Update & Delete) tasks on PPE inventory records granted for a single user.	Multithreading for concurrent use.

1.3 Timeline

Table 3: Project Timeline

ID	Title	Dependency
5	Assignment 3	4.5
5.1	Implement source code phase 2	4.5
5.1.1	Translate design into code (up to 100%)	4.5
5.1.2	Evaluate code	5.1.1
5.1.3	Identify gaps in requirements and design	3.1.6, 3.6.7, 5.1.2
5.1.4	Evaluate implementation of code	5.1.3
5.1.5	Refine requirements traceability matrix	5.1.4
5.2	*Phase 2 source code implementation complete*	5.1.5
5.3	Complete testing	5.2
5.3.1	Refine test plan (traceability matrix)	5.2
5.3.2	Prepare test tracking tools	5.3.1
5.3.3	Create test environment	5.3.1
5.3.4	Complete system testing	5.3.3
5.3.5	Implement build procedures	5.3.4
5.3.6	Load data into test environment	5.3.5
5.3.7	Develop test scripts	5.3.6
5.3.8	Execute test scripts	5.3.7
5.3.9	Correct defects (if any)	5.3.8
5.3.10	Document test results	5.3.9
5.3.11	Obtain approval of testing from Facilitator	5.3.10
5.3.12	Update support documents (if required)	3.5.7, 5.3.11
5.3.13	Store test data	5.3.12
5.4	*Testing complete*	5.3.13
5.5	Complete deployment	5.4
5.5.1	Refine deployment plan	3.5.6, 5.4
5.5.2	Prepare production environment	5.5.1
5.5.3	Complete data conversion activities	5.5.2
5.5.4	Complete operation and maintenance prep	5.5.3
5.5.5	Validate code functionality	5.5.4
5.5.6	Deploy code	5.5.5
5.6	*Deployment complete*	5.5.6
5.7	Complete presentation	5.6
5.7.1	Select slide presentation template	5.6
5.7.2	Develop presentation content	5.7.1
5.7.3	Submit presentation to Facilitator	5.7.2
5.8	*Presentation complete*	5.7.3



Legend

- Purple bars = Level 1 tasks
- Blue bars = Level 2 tasks
- Green bars = Level 3 tasks

1.3.1 Milestones and Deliverables

Table 4: Project Milestones and Deliverables

MILESTONE	DATE	DELIVERABLES
Preliminary Investigative Report	May 21st, 2021	Written Report
Feasibility Study	May 24th, 2021	Written Report and a go/no-go decision
Project Plan & Presentation	June 10th, 2021	Written report and slide presentation
Code for the feature of, Sign-Up with Username & Password "Registration"	June 15th, 2021	Code and documentation of Testing Procedures
Sign-In with Username & Password "User Authentication"	June 18th, 2021	Code and documentation of Testing Procedures
Regular users can perform CRUD (Create, Read, Update & Delete) tasks on PPE inventory records granted for a single user.	June 28th, 2021	Code and documentation of Testing Procedures
Additional Feature of Password recovery	July 12th, 2021	Code and documentation of Testing Procedures
Additional Feature of Authorization levels	August 1st, 2021	Code and documentation of Testing Procedures
Testing of Webapp	August 5th, 2021	Tracking Log
Deployment of Webapp	August 10th, 2021	URL or Link for the deployed project

1.4 Risks

Project risks are uncertain events or conditions that, if they occur, have positive effects (opportunities) or negative effects (threats) on one or more project objectives, such as scope, schedule, cost, and/or quality.

Table 5: Project Risks

No.	RISK DESCRIPTION	PROBABILITY (H/M/L)	IMPACT (H/M/L)	MITIGATION
1.	Schedule slippage	M	H	Track project scope and timeline **That was handled properly by following the project plan timeline.**
2.	Challenges in Installation & Configuration of Python Everywhere Hosting Environment for Deployment	L	H	I followed a tutorial by “pythoneverywhere” on how to deploy python based webapps with MySQL database connection.
3.	Challenges in Installation & Configuration of Selenium for Testing	L	H	I followed YouTube tutorial on how to configure the testing environment of Selenium.

1.5 Assumptions

In this section the principal project assumption is identified.

Table 6: Project Assumptions

No.	THE FOLLOWING IS ASSUMNED
1.	Fundamentals of new programming language will be learned and put to use, timely, to complete project
2.	DBMS part (MySQL workbench) is properly working having used it for the same project when implemented in Java instead of Python.

1.6 Technical Constraints

In this section the principle technical constraint is identified.

Table 7: Technical Constraints

No.	TECHNICAL CONSTRAINTS
1.	For deployment of the webapp on pythoneverywhere hosting service, I had to switch from using MySQLdb library of python to SqlAlchemy that is supported by the hosting service. That got me to change how the app.py database configuration part is coded.

1.7 Budget

In this section a preliminary budget is estimated. Only in-scope items, as identified in section 1.3 above, are included. Out of scope items are excluded. It is understood that unforeseen events and changes may result in revisions to the project budget.

Table 8: Project Budget

1	20F PROGRAMMING LANGUAGE RESEARCH PROJECT							
2	ID	Title						Level of Effort (Days)
4	1	Programming Language Research Project						68.50
5	2	Planning						6.50
6	2.1		Review project approach					2.00
7	2.2		Define project scope					0.50
8	2.3		Identify project risks, assumptions and constraints					2.00
9	2.4		Draft project budget					1.00
10	2.5		Document project schedule (timeline)					1.00
11	*2.6*	*Planning Complete*						0.00
12	3	Assignment 1						17.00
13	3.1		Gather requirements					6.50
14	3.1.1			Define requirements gathering process				2.00
15	3.1.2			Develop use cases				1.00
16	3.1.3			Describe data requirements				0.50
17	3.1.4			Document technical requirements				0.50
18	3.1.5			Illustrate user interface				0.50
19	3.1.6			Create requirements traceability matrix				2.00
20	*3.2*		*Requirements gathering complete*					0.00
21	3.3		Complete feasibility study					4.00
22	3.3.1			Define evaluation criteria				1.00
23	3.3.2			Analyze development options				1.00
24	3.3.3			Complete cost/benefit analysis				1.00
25	3.3.4			Document recommended solution				1.00
26	*3.4*		*Feasibility study complete*					0.00
27	3.5		Provide design description					6.50
28	3.5.1			Create high level design				2.00
29	3.5.2			Develop prototype				1.00
30	3.5.3			Illustrate logical data model				0.50
31	3.5.4			Describe DBMS platform				0.50
32	3.5.5			Refine requirements traceability matrix				0.50
33	3.5.6			Draft deployment plan				1.00
34	3.5.7			Draft support plan				1.00
35	*3.6*		*Design description complete*					0.00
36	*3.7*	*Assignment 1 complete*						0.00

2 Status

2.1 Introduction

This section of the report aims at showcasing the progress achieved in the project and demonstrate about the status of the project.

This is clarified by including details about features the were put in action and running properly, and the timeline at which those features were implemented. This aims at better identifying the average burndown rate of the project comparing the efforts exerted (in hours) along with time.

Also in this section, there is a justification of why a certain programming language was chosen over the other, as well as justification for the usage of some tools in specific.

2.2 Accomplishments

Table 9: Accomplishments

Task	When it was completed	Early/On Time/ Late
Creating First Web page with Python +Flask	June 13, 2021	On Time
Creating First Database Connection with **Python + MySQLDB**	June 15, 2021	Late
Creating Sign-Up Page and Function	June 15, 2021	On Time
Creating Sign-In Page and Function	June 18, 2021	On Time
Creating CRUD Panel Page and Function	June 20, 2021	On Time
Creating PPE Data Insertion Page and Function	June 22, 2021	On Time
Creating PPE Data Read Page and Function	June 23, 2021	On Time
Creating PPE Data Update Page and Function	June 26, 2021	On Time
Creating PPE Data Delete Page and Function	June 28, 2021	On Time

Testing of Webapp	August 5th, 2021	On Time
Deployment of Webapp	August 10th, 2021	On Time

2.3 Goals

Daily Goals

1- Develop new test use cases.

Weekly Goals

- Deploy the webapp

2.4 Roadblocks

I have not addressed the “Concurrency” aspect of my application. Based on that, I am not sure if it is going to be hard to learn about how to address this in Python or not. But still I am concerned as it took my very long time to address the same issue while I studied Java and OOP. If handling concurrency in Python is as complicated as in Java, my self-learning capabilities might not help me address concurrency in the course time window.

2.5 Lessons Learned

Table 10: Project Status

Activity	Completed	If “No” Please Explain
Completion of Requirement Analysis phase.	Yes/No	
Completion of project related Feasibility Study.	Yes/No	
Completion of Project Design along with your Project Title and definition.	Yes/No	
Submission of Power Point Presentation includes Requirement Analysis, Feasibility Study and Project Design phases of your project.	Yes/No	
Submission of Partially done Project Report [word file], having detailed information about the first three modules of your project.	Yes/No	
Feedback taken from facilitator regarding all your submissions [presentation and report].	Yes/No	
Discussion between Facilitator and Developer regarding any updates suggested by the facilitator.	Yes/No	

Activity	Completed	If "No" Please Explain
Submit the final presentation and final project report to the facilitator within the given deadline.	Yes/No	
Facilitator approved the final submission-1 and allow you to start next phase of your development.	Yes/No	

2.6 Next Steps

I might think of integrating it in data warehouse application where data is being used to serve business intelligence purposes.

3 Source Code Implementation

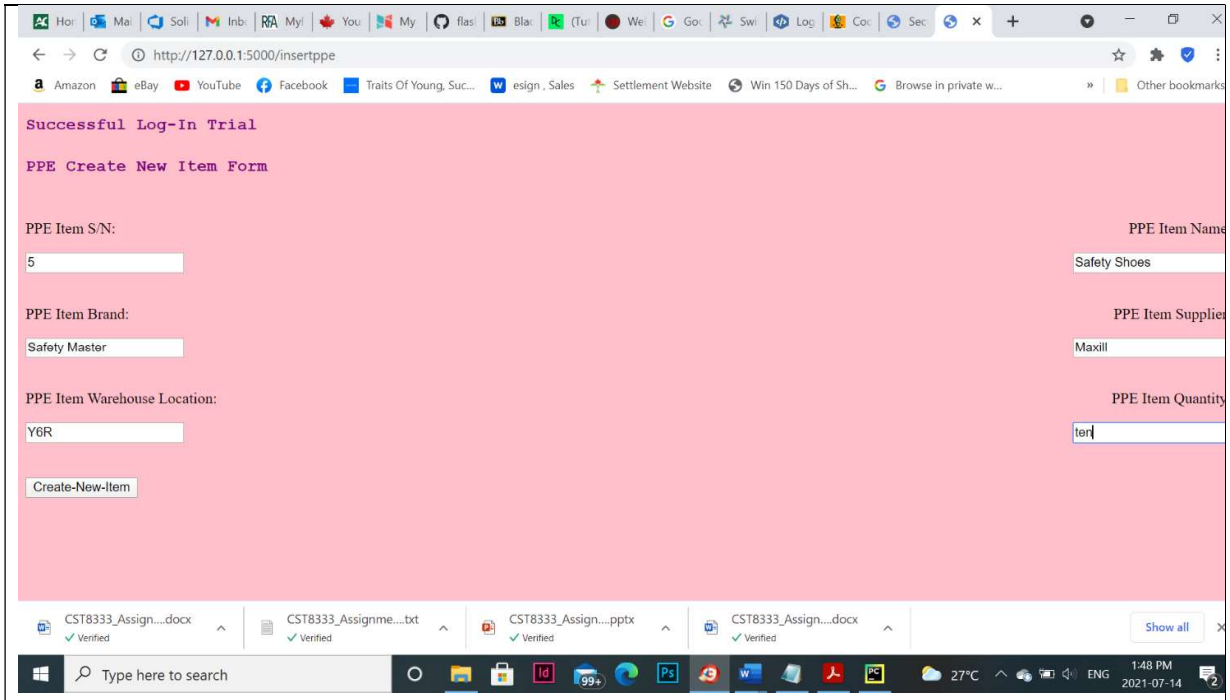
3.1 Introduction

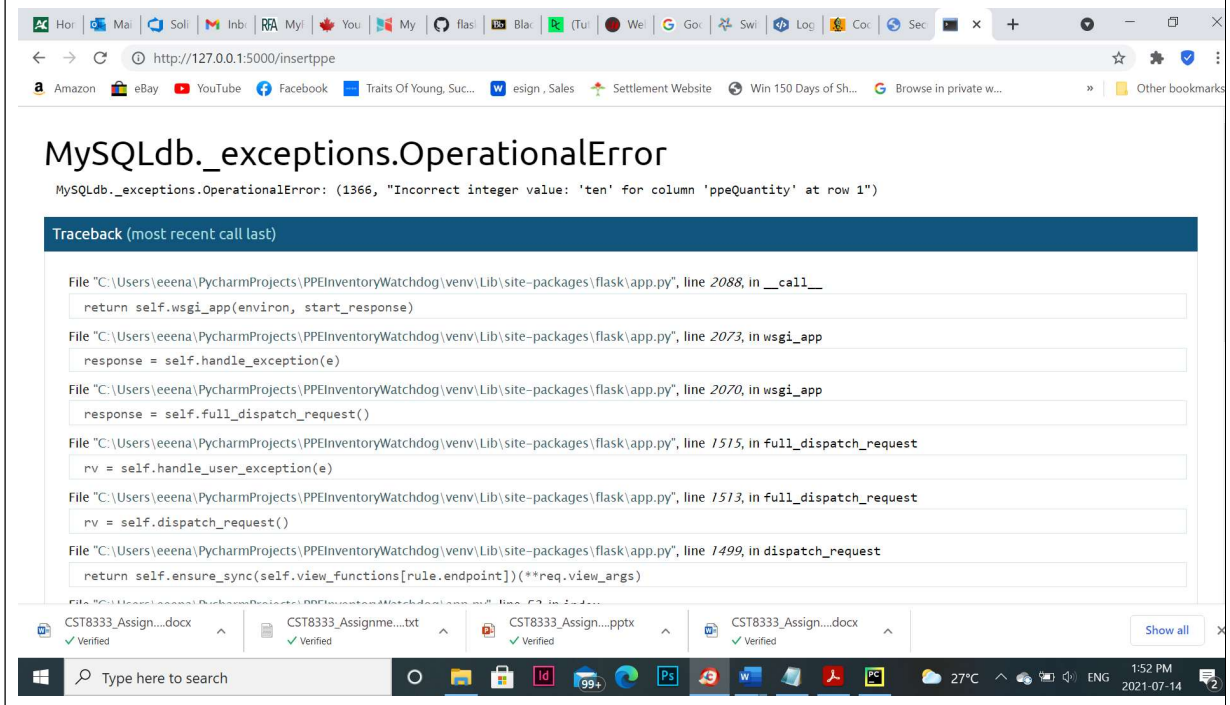
During the implementation phase of the software development life cycle (SDLC) the development team creates the agreed upon solution to the business problem identified at the outset of the project. Project developers begin building the software in the staging or development environment using the programming language that was chosen in the previous phase of the project. Also known as building or coding, this stage is where the planning and prototyping come together.

3.2 Coding Checklist

Table 14: Coding Checklist

Description	Completed	If "No" Please Explain
Objective based [Purposeful] - The code achieves its purpose. In simple terms, it does what it is supposed to.	Yes	
Unbreakable [Validated] - Validations are used wherever necessary. The code never breaks under any circumstances. Especially under invalid inputs that come from the user end. Regardless of it being a negative, over-sized, invalid format, etc., every input passed should be processed, sanitized before taking it further. Every object is checked for its actual data existence before accessing its properties.	Yes	
Responses are handled [Error handling and Data formatting] - Not just the error messages, every response that is returned by the server must be properly handled. It should have necessary headers, response messages, error codes and any other necessary details attached with it in required format. All possible scenarios are tested to avoid deadlocks, timeouts, etc.	No	Not in this phase yet. Some erroneous data might be entered, like in the case of inserting a string into an integer field of the PPE quantity. That would be rejected, an automatic error message appears. But not a customized error message that is included in the code and would still show inside the page.





Follows architecture [No design deviation] - Verify that the approved architecture/design is followed throughout the application (If there is none, consider putting it in place). If there are any design changes required, ensure that these are documented, baselined and	Yes	

approved before implementing them in the existing code.		
Unit tested [Reliable] - Every core method has a unit test which passes.	Yes	
Reusable [No repetition] - All methods serve a limited and clear purpose (follows DRY principle). Functions are reused wherever applicable and written in such a way that they can be re-used in the future implementations. There is no duplication of code. Logics make use of general functions without ambiguity.	Yes	
Performance oriented [Speedy response & Scalability] - The landing of the application is swift. There are no long delays between the requests and responses. Raw string concatenations are avoided and proper methods such as StringBuilder are used. The code is scalable and able to handle a large amount of data and upcoming features.	Yes	
Code Review Checklist - Comprehensive - Advanced code review	Yes	
Manageable [Crisp and Formatted] - The code is readable, commented and easy to manage. It is friendly formatted and easy to read/understand. Methods are not too big to manage and they don't exceed readable size.	Yes	
Meets coding conventions and standards [Standardized approach] - The code follows the coding conventions, standards and is consistent with the existing application code. There are no commented code and hard coded values.	Yes	
Detach connections after usage [Memory handling] - Resources that are not automatically released after usage are freed. Connections, ports are closed properly.	Yes	
On-demand resource delivery[Fast] - Resources are fetched and delivered only on demand. Necessary options are available for dealing with huge data such as paginations, etc.	Yes	
No warnings / console logs [Data safety] - No compiler warnings arise while running the application. Logs that are used while	Yes	

developing are cleared and none of the application information (especially the sensitive ones) are written in the browser console.		
Legal usage of third-party tools/libraries[Licensing] - External libraries are used only if proven necessary for the application. If there are third-party tools or libraries used, then the licenses and legal usages are verified and complaint.	Yes	

3.3 Submit Code

Attached along with this report and uploaded to Brightspace.

4 Testing

4.1 Introduction

The purpose of software testing is to identify errors, gaps, or missing requirements in contrast to actual requirements. Testing may be resource-intensive, but in addition to ensuring requirements have been met it supports cost-effectiveness; it costs less to fix defects identified during testing than those identified post-implementation. Fixing defects enhances product quality which, in turn, drives customer satisfaction.

4.2 Requirements Traceability Matrix

Table 13: Requirements Traceability Matrix

No.	CATEGORY	REQ'T	TEST	EXPECTED RESULT	ACTUAL RESULT	PASS/FAIL	COMMENTS
1	Sign-up	User saves desired original credentials in system database	run following sql statement in MySQL workbench, SELECT * FROM UsersOriginalCredentials;	To read the credentials from credentials table in the database.	Credentials are inserted into users table and stored successfully.	Pass	None
2	Sign-in	User is able to access the system using the same log-in data he or she registered with.	User enters log-in data in specified edit boxes on the interface.	Successful log-in	Log-in data is compared with logging credentials stored in the database. If there is a match, user is able to access the CRUD panel. If there is no match, a message appears telling the user that either username or password are incorrect.	Pass	None
3	Create Record	Regular User can enter a PPE data of a single row	run following sql statement in MySQL workbench,	Read the entered data from the table	Data could be inserted into PPEDATA table.	Pass	None

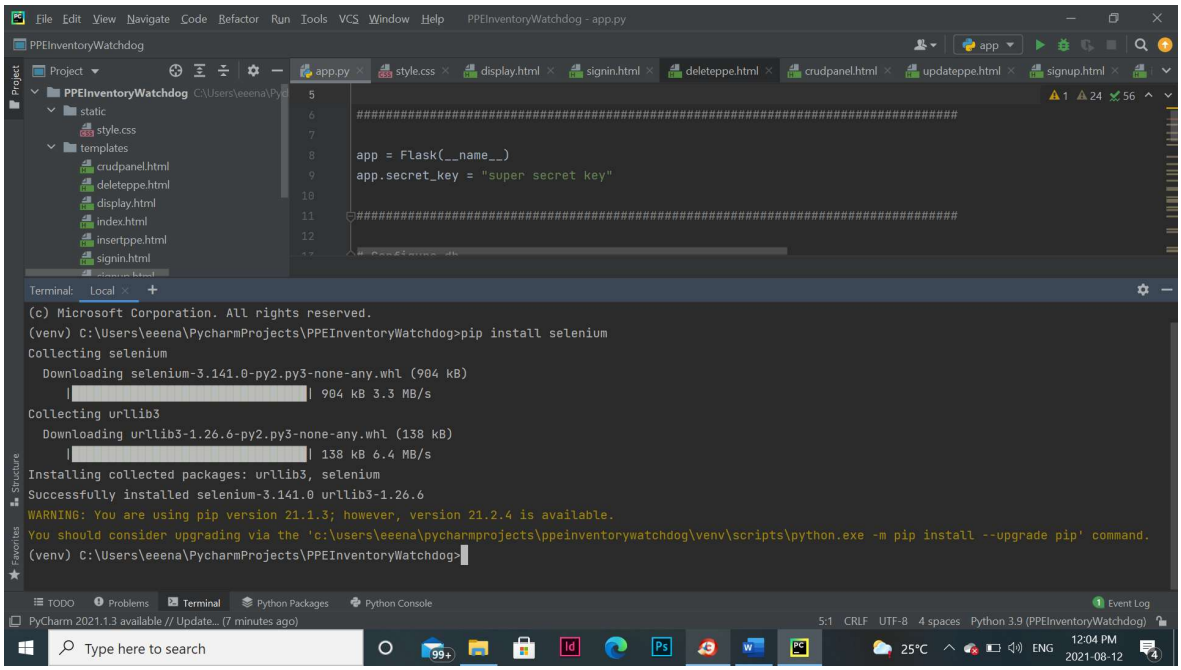
No.	CATEGORY	REQ'T	TEST	EXPECTED RESULT	ACTUAL RESULT	PASS/FAIL	COMMENTS
			SELECT * FROM PPEData;				
4	Read Record	Regular User can read PPE data from the database	User presses the "Read" button on his/her panel	Read PPE data from database into web page or interface	Data could be selected from PPEDATA table and displayed.	Pass	None
5	Update Record	Regular User can update a PPE record	run following sql statement in MySQL workbench, SELECT * FROM PPEData;	The record is successfully updated	The quantity of a PPE item could be altered using its name and entering new quantity.	Pass	None
6	Delete Record	Regular User can delete a PPE record	run following sql statement in MySQL workbench, SELECT * FROM PPEData;	The record is successfully deleted	A record of PPE item could be deleted using its name.	Pass	None

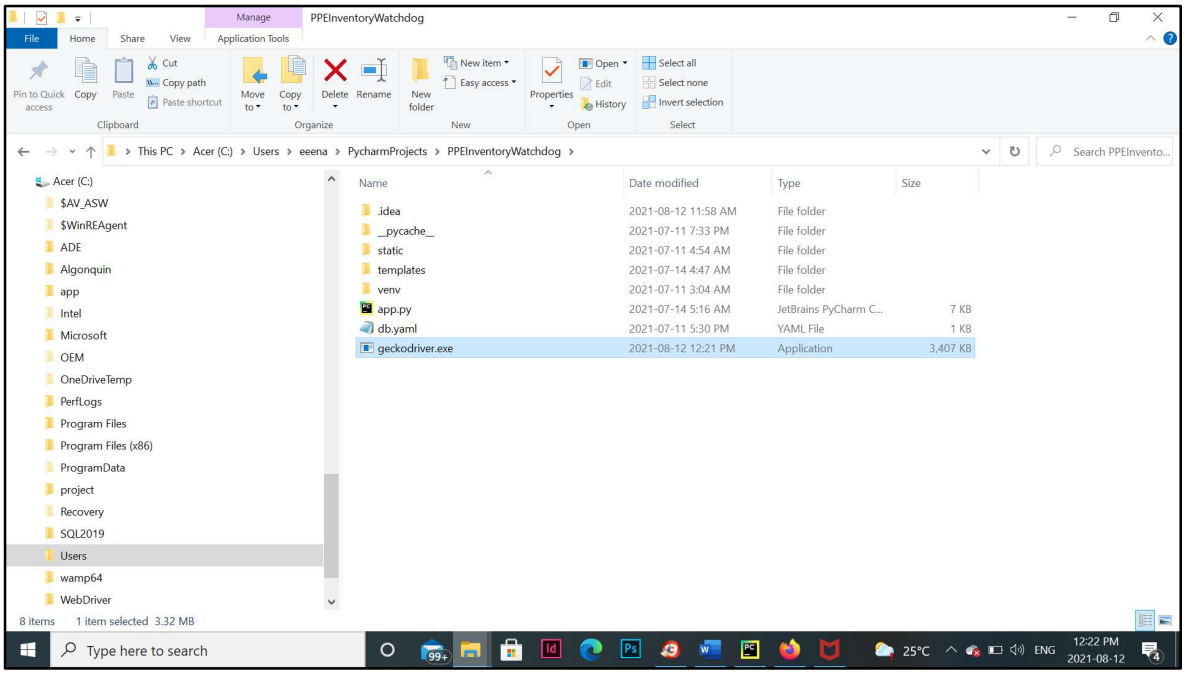
4.3 Test Tracking Tools

Selenium offers testing for python-based web applications. Selenium Python bindings provides a simple API to write functional/acceptance tests using Selenium WebDriver.

4.4 Test Environment

- **pip install selenium**





4.5 Test Scripts

```
from selenium import webdriver
import time


driver =
webdriver.Firefox(executable_path=r'C:\Users\eeena\PycharmProjects\PPEInventoryWa
tchdog\geckodriver.exe')


driver.get('http://127.0.0.1:5000/')


time.sleep(4)


driver.find_element_by_xpath('/html/body/form/div[1]/input').click()

time.sleep(4)

driver.close()
```

4.6 Test Log

Video is attached in the supporting presentation.

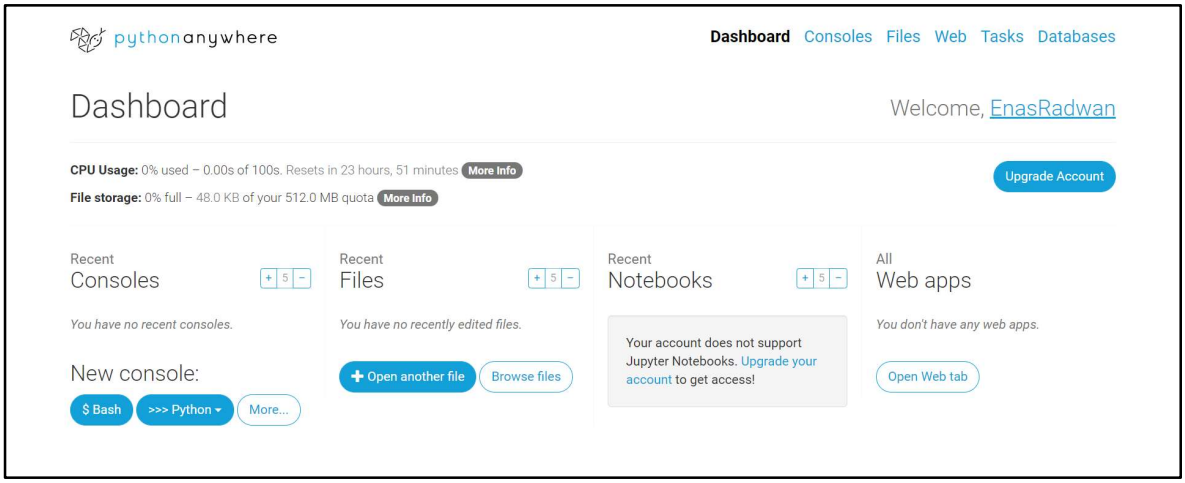
5 Deployment

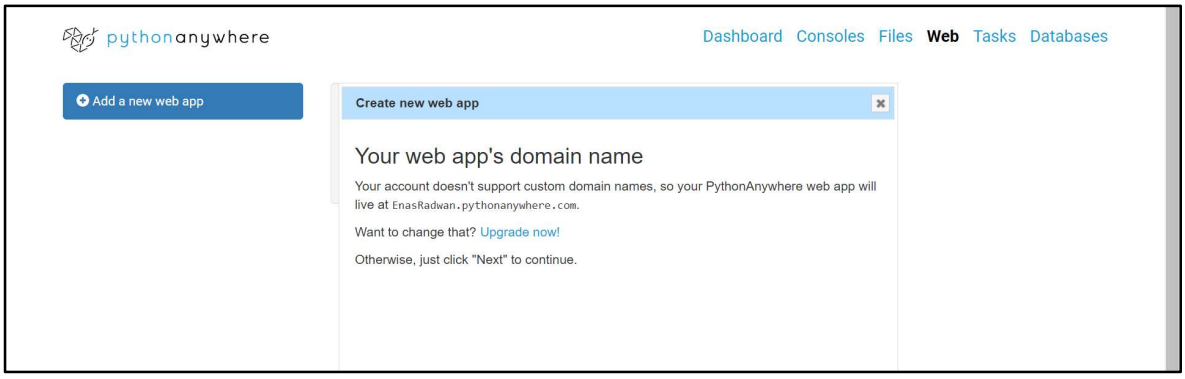
5.1 Introduction

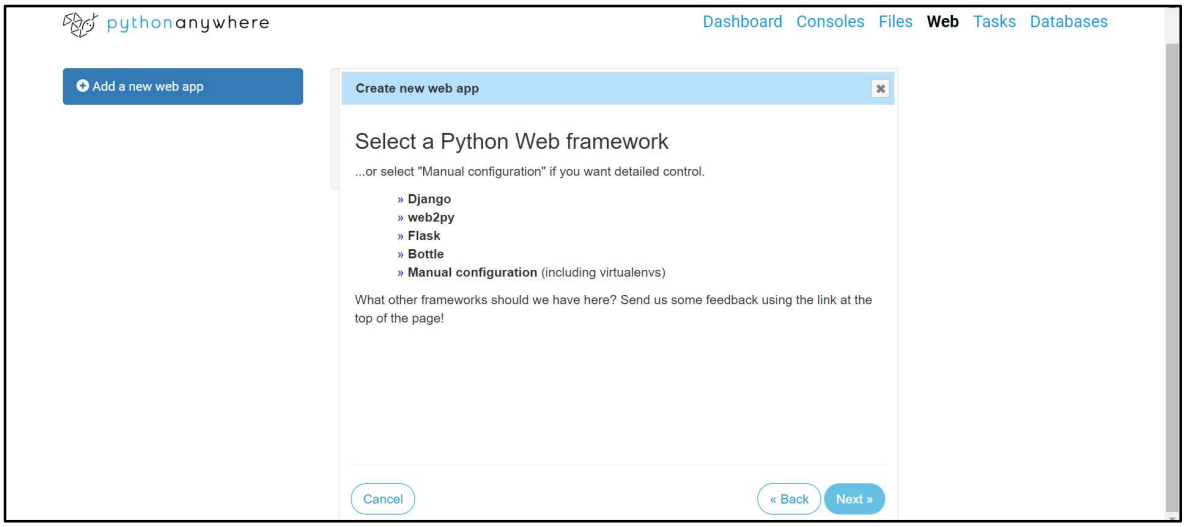
The deployment phase is the final phase of the software development life cycle (SDLC) and results in the migration of the product to the production environment. The objective of the deployment phase is to make the developed software operational in a live environment. Deployment in the operational environment comes only after the product is fully tested and accepted by the business.

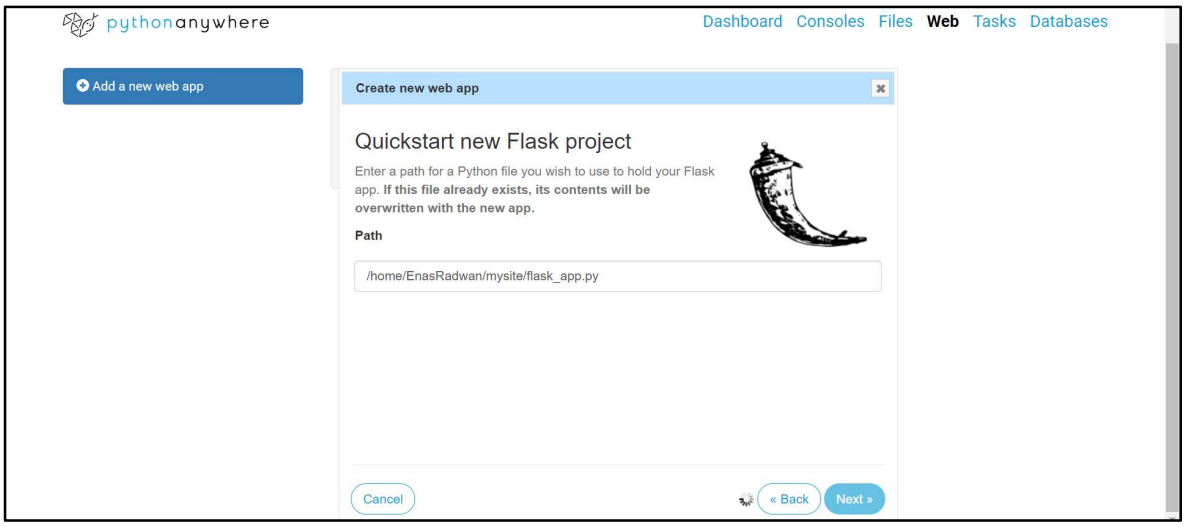
5.2 Software Integration Plan

Pythoneverywhere offers web hosting service for python based web applications. It has the feasibility of adding databasesd that are MySQL based using **SQLALCHEMY.** Kindly find hereunder the steps taken for deployment.






pythonanywhere
Dashboard Consoles Files Web Tasks Databases
Add a new web app
Create new web app
Select a Python Web framework
...or select "Manual configuration" if you want detailed control.
» Django
» web2py
» Flask
» Bottle
» Manual configuration (including virtualenvs)
What other frameworks should we have here? Send us some feedback using the link at the top of the page!
Cancel
« Back
Next »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Dashboard Consoles Files Web Tasks Databases
Add a new web app
Create new web app
Quickstart new Flask project
Enter a path for a Python file you wish to use to hold your Flask app. If this file already exists, its contents will be overwritten with the new app.
Path
/home/EnasRadwan/mysite/flask_app.py
Cancel
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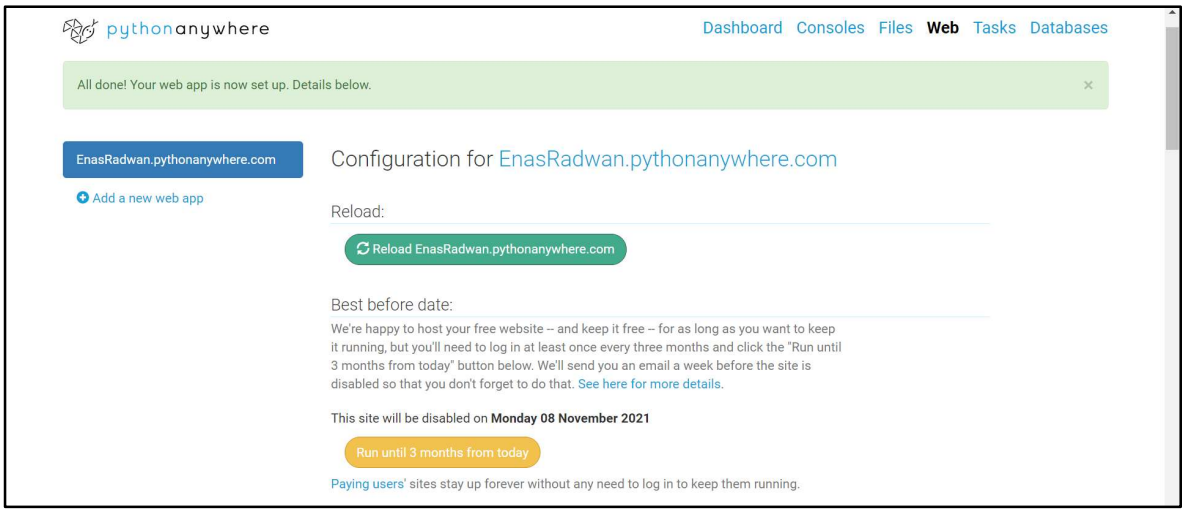
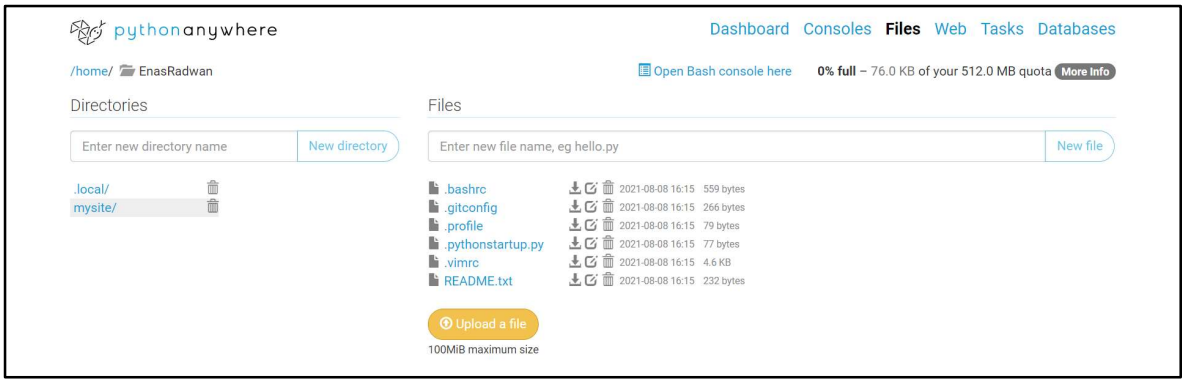
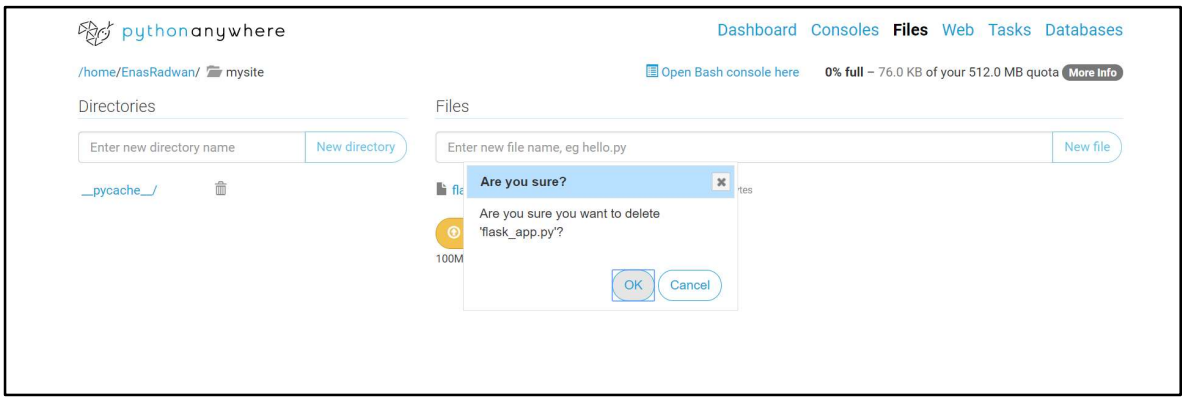
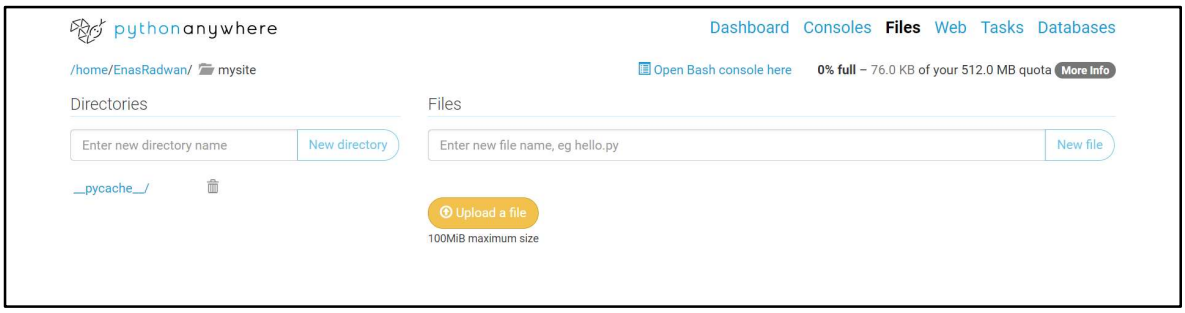
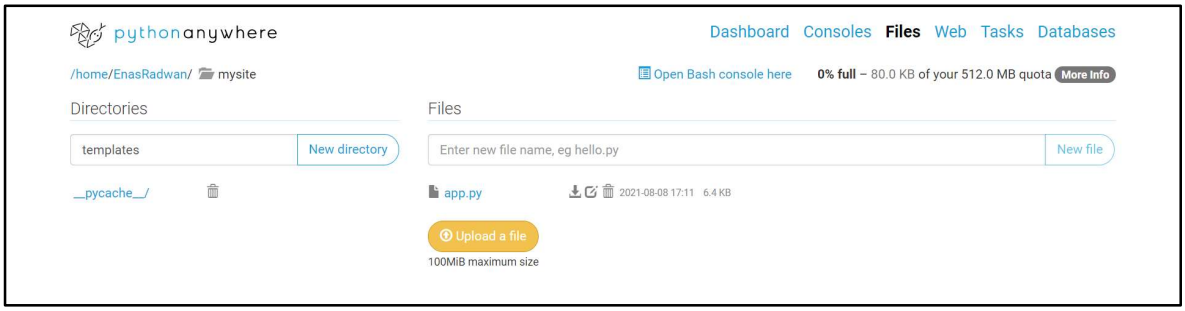
Next »

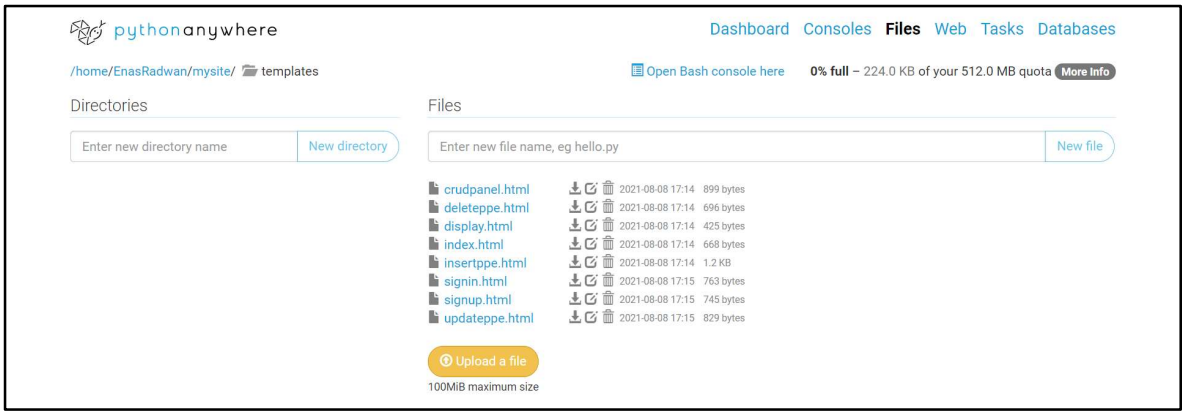

pythonanywhere
Dashboard Consoles Files Web Tasks Databases
All done! Your web app is now set up. Details below.
EnasRadwan.pythonanywhere.com
Add a new web app
Configuration for EnasRadwan.pythonanywhere.com
Reload:
Reload EnasRadwan.pythonanywhere.com
Best before date:
We're happy to host your free website -- and keep it free -- for as long as you want to keep it running, but you'll need to log in at least once every three months and click the "Run until 3 months from today" button below. We'll send you an email a week before the site is disabled so that you don't forget to do that. See here for more details.
This site will be disabled on Monday 08 November 2021
Run until 3 months from today
Paying users' sites stay up forever without any need to log in to keep them running.

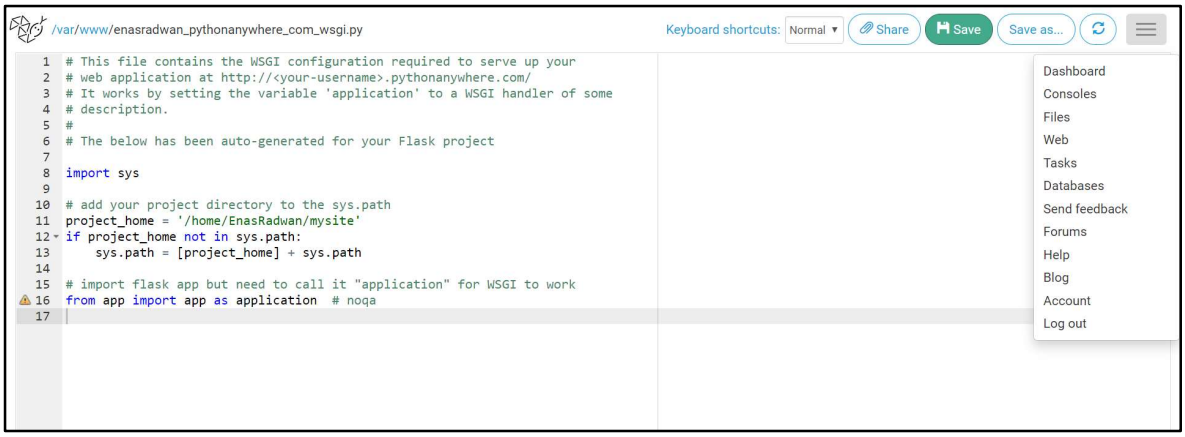

pythonanywhere
Dashboard Consoles Files Web Tasks Databases
/home/ EnasRadwan
Open Bash console here
0% full – 76.0 KB of your 512.0 MB quota
More Info
Directories
Enter new directory name
New directory
.local/
mysite/
Files
Enter new file name, eg hello.py
New file
.bashrc 2021-08-08 16:15 559 bytes
.gitconfig 2021-08-08 16:15 266 bytes
.profile 2021-08-08 16:15 79 bytes
.pythonstartup.py 2021-08-08 16:15 77 bytes
.vimrc 2021-08-08 16:15 4.6 KB
README.txt 2021-08-08 16:15 232 bytes
Upload a file
100MiB maximum size

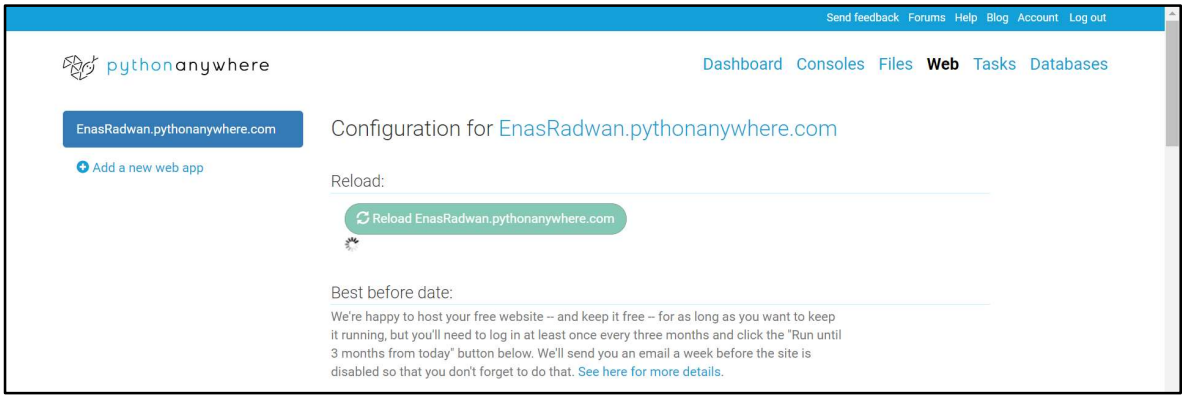

pythonanywhere
Dashboard Consoles Files Web Tasks Databases
/home/EnasRadwan/ mysite
Open Bash console here
0% full – 76.0 KB of your 512.0 MB quota
More Info
Directories
Enter new directory name
New directory
__pycache__/
Files
Enter new file name, eg hello.py
New file
Are you sure?
Are you sure you want to delete 'flask_app.py'?
OK
Cancel


pythonanywhere
Dashboard Consoles Files Web Tasks Databases
/home/EnasRadwan/ mysite
Open Bash console here
0% full – 76.0 KB of your 512.0 MB quota
More Info
Directories
Enter new directory name
New directory
__pycache__/
Files
Enter new file name, eg hello.py
New file
Upload a file
100MiB maximum size

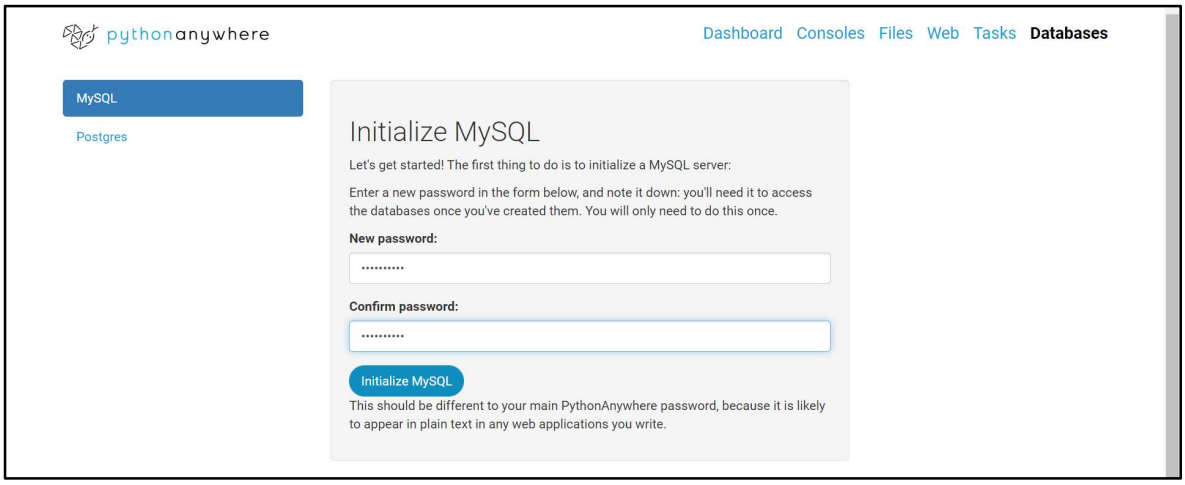

pythonanywhere
Dashboard Consoles Files Web Tasks Databases
/home/EnasRadwan/ mysite
Open Bash console here
0% full – 80.0 KB of your 512.0 MB quota
More Info
Directories
templates
New directory
__pycache__/
Files
Enter new file name, eg hello.py
New file
app.py 2021-08-08 17:11 6.4 KB
Upload a file
100MiB maximum size

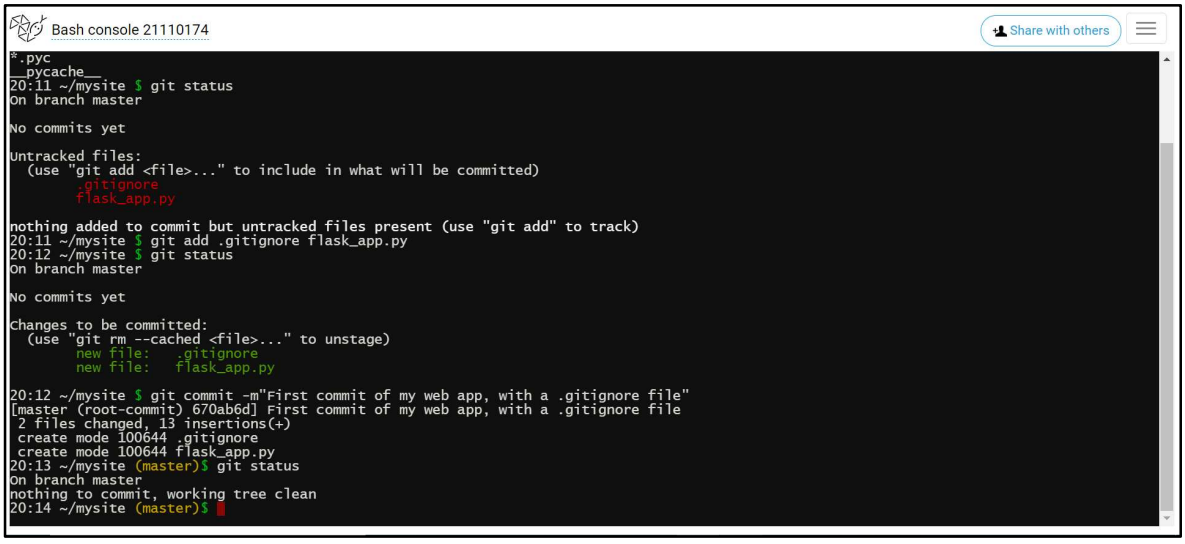

pythonanywhere
Dashboard Consoles Files Web Tasks Databases
/home/EnasRadwan/mysite/ templates
Open Bash console here
0% full – 224.0 KB of your 512.0 MB quota More Info
Directories
Enter new directory name
New directory
Files
Enter new file name, eg hello.py
New file
crudpanel.html 2021-08-08 17:14 899 bytes
deleteppe.html 2021-08-08 17:14 696 bytes
display.html 2021-08-08 17:14 425 bytes
index.html 2021-08-08 17:14 668 bytes
insertppe.html 2021-08-08 17:14 1.2 KB
signin.html 2021-08-08 17:15 763 bytes
signup.html 2021-08-08 17:15 745 bytes
updateppe.html 2021-08-08 17:15 829 bytes
Upload a file
100MiB maximum size

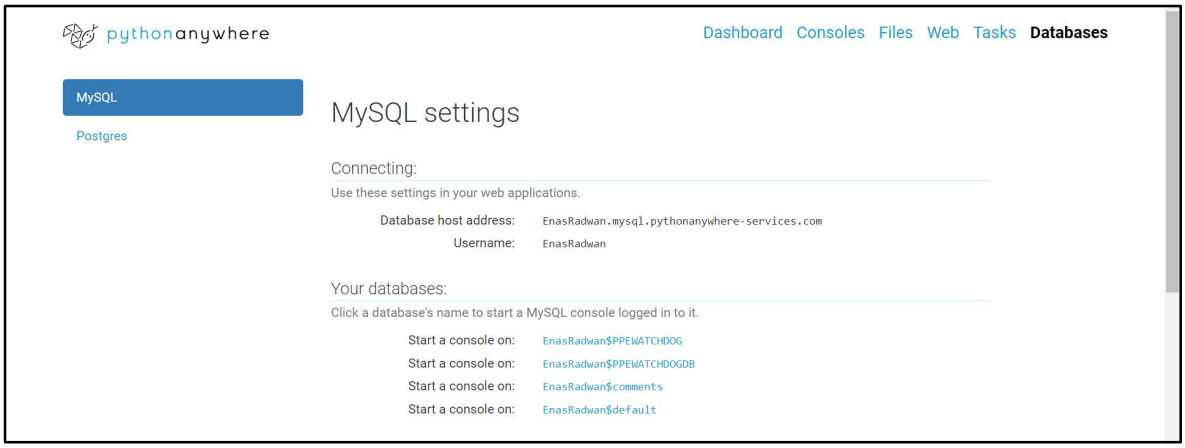

/var/www/enasradwan_pythonanywhere_com_wsgi.py
Keyboard shortcuts: Normal
Share
Save
Save as...
This file contains the WSGI configuration required to serve up your
web application at http://<your-username>.pythonanywhere.com/
It works by setting the variable 'application' to a WSGI handler of some
description.
#
# The below has been auto-generated for your Flask project
import sys
# add your project directory to the sys.path
project_home = '/home/EnasRadwan/mysite'
if project_home not in sys.path:
sys.path = [project_home] + sys.path
# import flask app but need to call it "application" for WSGI to work
from app import app as application # noqa
Dashboard
Consoles
Files
Web
Tasks
Databases
Send feedback
Forums
Help
Blog
Account
Log out

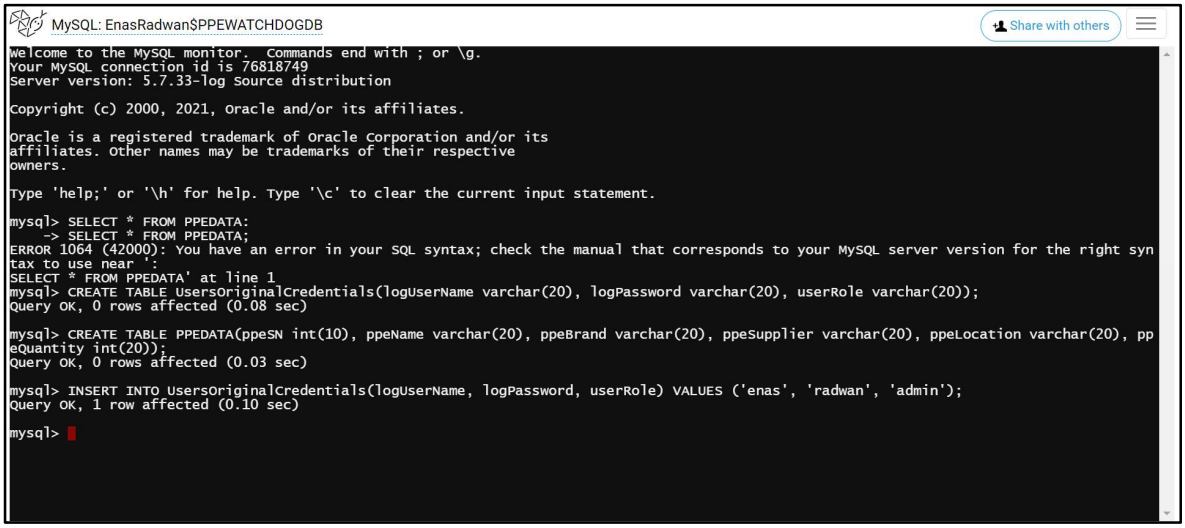

Send feedback Forums Help Blog Account Log out
pythonanywhere
Dashboard Consoles Files Web Tasks Databases
EnasRadwan.pythonanywhere.com
Add a new web app
Configuration for EnasRadwan.pythonanywhere.com
Reload:
Reload EnasRadwan.pythonanywhere.com
Best before date:
We're happy to host your free website -- and keep it free -- for as long as you want to keep it running, but you'll need to log in at least once every three months and click the "Run until 3 months from today" button below. We'll send you an email a week before the site is disabled so that you don't forget to do that. See here for more details.


pythonanywhere
Dashboard Consoles Files Web Tasks Databases
CPU Usage: 0% used – 0.00s of 100s. Resets in 20 hours, 58 minutes More Info
Start a new console:
Python: 3.9 / 3.8 / 3.7 / 3.6 IPython: 3.9 / 3.8 / 3.7 / 3.6 PyPy: 2 / 3
Other: Bash | MySQL
Custom:
Your consoles:
You have no consoles. Click a link above to start one.
Consoles shared with you
No-one has shared any consoles with you :-(
Running processes
Fetch process list


pythonanywhere
Dashboard Consoles Files Web Tasks Databases
MySQL
Postgres
Initialize MySQL
Let's get started! The first thing to do is to initialize a MySQL server:
Enter a new password in the form below, and note it down: you'll need it to access the databases once you've created them. You will only need to do this once.
New password:
Confirm password:
Initialize MySQL
This should be different to your main PythonAnywhere password, because it is likely to appear in plain text in any web applications you write.


Bash console 21110174
Share with others
*.pyc
__pycache__
20:11 ~/mysite $ git status
On branch master
No commits yet
Untracked files:
(use "git add <file>..." to include in what will be committed)
.gitignore
flask_app.py
nothing added to commit but untracked files present (use "git add" to track)
20:11 ~/mysite $ git add .gitignore flask_app.py
20:12 ~/mysite $ git status
On branch master
No commits yet
Changes to be committed:
(use "git rm --cached <file>..." to unstage)
new file: .gitignore
new file: flask_app.py
20:12 ~/mysite $ git commit -m"First commit of my web app, with a .gitignore file"
[master (root-commit) 670ab6d] First commit of my web app, with a .gitignore file
2 files changed, 13 insertions(+)
create mode 100644 .gitignore
create mode 100644 flask_app.py
20:13 ~/mysite (master)$ git status
On branch master
nothing to commit, working tree clean
20:14 ~/mysite (master)$


pythonanywhere
Dashboard Consoles Files Web Tasks Databases
MySQL
Postgres
MySQL settings
Connecting:
Use these settings in your web applications.
Database host address: EnasRadwan.mysql.pythonanywhere-services.com
Username: EnasRadwan
Your databases:
Click a database's name to start a MySQL console logged in to it.
Start a console on: EnasRadwan$PPEWATCHDOG
Start a console on: EnasRadwan$PPEWATCHDOGDB
Start a console on: EnasRadwan$comments
Start a console on: EnasRadwan$default


MySQL: EnasRadwan$PPEWATCHDOGDB
Share with others
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 76818749
Server version: 5.7.33-log Source distribution
Copyright (c) 2000, 2021, Oracle and/or its affiliates.
Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
mysql> SELECT * FROM PPEDATA:
-> SELECT * FROM PPEDATA;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near ':
SELECT * FROM PPEDATA' at line 1
mysql> CREATE TABLE UsersOriginalCredentials(logUserName varchar(20), logPassword varchar(20), userRole varchar(20));
Query OK, 0 rows affected (0.08 sec)
mysql> CREATE TABLE PPEDATA(ppeSN int(10), ppeName varchar(20), ppeBrand varchar(20), ppeSupplier varchar(20), ppeLocation varchar(20), ppeQuantity int(20));
Query OK, 0 rows affected (0.03 sec)
mysql> INSERT INTO UsersOriginalCredentials(logUserName, logPassword, userRole) VALUES ('enas', 'radwan', 'admin');
Query OK, 1 row affected (0.10 sec)
mysql>


/home/EnasRadwan/mysite/flask_app.py (unsaved changes)
Keyboard shortcuts: Normal
Share
Save
Save as...
>>> Run
# A very simple Flask Hello World app for you to get started with...
from flask import Flask, redirect, render_template, request, url_for
from flask_sqlalchemy import SQLAlchemy
app = Flask(__name__)
app.config["DEBUG"] = True
SQLALCHEMY_DATABASE_URI = "mysql+mysqlconnector://{username}:{password}@{hostname}/{databasename}".format(
username="EnasRadwan",
password="Switch2021",
hostname="EnasRadwan.mysql.pythonanywhere-services.com",
databasename="EnasRadwan$PPEWATCHDOGDB",
)
app.config["SQLALCHEMY_DATABASE_URI"] = SQLALCHEMY_DATABASE_URI
app.config["SQLALCHEMY_POOL_RECYCLE"] = 299
app.config["SQLALCHEMY_TRACK_MODIFICATIONS"] = False
db = SQLAlchemy(app)

6 References

(2020). Ohio.Gov. https://regents.ohio.gov/obrpmcop/forms/templates/temp_systemapplicationsupport.doc

How to Write an Effective Test Summary Report (Sample Report Download). (2020, September 1). Retrieved September 27, 2020, from https://www.softwaretestinghelp.com/test-summary-report-template-download-sample/

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Software Testing - Checklists | QA and Software Testing Tutorial. (n.d.). Www.Qatutorial.Com. Retrieved September 27, 2020, from http://www.qatutorial.com/Software-Testing-Checklists#:~:text=This%20MS-Word%20based%20Checklist%20on%20Software%20Testing%20contains,and%20data%20conversion%2C%20Training%20and%20many%20other%20sections.

The QA Software Testing Checklists (Sample Checklists Included). (2013, November 27). Softwaretestinghelp.Com. https://www.softwaretestinghelp.com/software-testing-qa-checklists/

7 Appendix A: Module 10 Checklist

Please use the checklist, below, to track your completion of assignment requirements. Please also note that it is possible that not all the items in the checklist will be applicable to your project. With that said, if you answer "No" in the Completed for an item, then please add a brief explanatory note.

Activity	Completed	If "No" Please Explain
Completion of Tools & Technology phase.	**Yes**/No	
Completion of Project Timeline phase by deciding time frame for project development.	**Yes**/No	
Completion of Source Code Implementation phase.	**Yes**/No	
Completion of Project Progress Report phase.	**Yes**/No	
Submission of Power Point Presentation includes details of Tools & Technology, Project Timeline and Source Code Implementation of your project.	**Yes**/No	
Submission of Project progress Report [word file], having detailed information about phases from project Requirement Analysis to Source Code Implementation.	**Yes**/No	
Feedback taken from facilitator regarding all your submissions [presentation and report].	**Yes**/No	
Discussion between Facilitator and Developer regarding any updates suggested by the facilitator.	**Yes**/No	
Submit the final presentation and final project report to the facilitator within the given deadline.	**Yes**/No	
Facilitator approved the final submission-2 and allows you to start next phase of your development.	**Yes**/No	

8 Appendix B: Module 11 Checklist

Please use the checklist, below, to track your completion of assignment requirements. Please also note that it is possible that not all the items in the checklist will be applicable to your project. With that said, if you answer "No" in the Completed for an item, then please add a brief explanatory note.

Activity	Completed	If "No" Please Explain
Review/refine or create the Test Plan.	**Yes**/No	
Determine test tracking tools, defects tracking list, and prepare defect tracking log.	**Yes**/No	
Create the test environment and setup automated test procedures, as appropriate. Adapt test reporting procedures based on size, complexity, and specific project needs. Develop test data management strategy.	**Yes**/No	
Validate the system with functional and structural testing.	**Yes**/No	
Review the results of the system verifications.	**Yes**/No	
Implement "build" procedures, execute smoke tests, and fix any errors that prohibit the build from being tested.	**Yes**/No	
Refine the data and load data into the test environment.	**Yes**/No	
Develop test scripts based on requirements, design specifications, and code development.	**Yes**/No	
Execute test scripts and create a test report.	**Yes**/No	
Report results of test scripts and update test issues and defect tracking list.	**Yes**/No	
Evaluate test reports to determine accomplishments and report status. Update the test log.	**Yes**/No	
Develop Final Test document summarizing all tests, results, defects found, etc.	**Yes**/No	

Activity	Completed	If “No” Please Explain
Plan and conduct a test review. Gather feedback and approval for the testing from facilitator.	**Yes**/No	
Review the System/Application Support Checklist and update support documents, as appropriate.	**Yes**/No	
Store the data collected during testing in accordance with configuration management procedures.	**Yes**/No	

9 Appendix C: Module 12 Checklist

Please use the checklist, below, to track your completion of assignment requirements. Please also note that it is possible that not all the items in the checklist will be applicable to your project. With that said, if you answer "No" in the Completed for an item, then please add a brief explanatory note.

Activities	Completed	If "No" Please Explain
Review/revise software integration process.	**Yes**/No	
Define development strategy to build application.	**Yes**/No	
Evaluate resources for the Development Phase.	**Yes**/No	
Have environment preparation activities (e.g. correct OS, memory etc.) been completed?	**Yes**/No	
Have planned data creation/conversion activities been executed or are they on schedule to be completed as planned?	**Yes**/No	
Are activities to enable the operation and maintenance of the product on schedule and ready for the planned completion?	**Yes**/No	
Review code to ensure it meets specifications.	**Yes**/No	
Is the code working properly as a workable application?	**Yes**/No	
Add programming code and screenshots of each module of workable application in project Report.	**Yes**/No	
Prepare for and conduct final development approval.	**Yes**/No	
Is project/website defect free?	**Yes**/No	
Has the website design been viewed and approved by the facilitator?	**Yes**/No	
Submit code and working application screenshots to facilitator.	**Yes**/No	
Feedback taken from facilitator about submitted code and application.	**Yes**/No	

Activities	Completed	If “No” Please Explain
Correct code according to updates given by facilitator.	**Yes**/No	
Submit final code and workable application to the facilitator.	**Yes**/No	

10 Appendix D: Module 13 Checklist

Please use the checklist, below, to track your completion of assignment requirements. Please also note that it is possible that not all the items in the checklist will be applicable to your project. With that said, if you answer "No" in the Completed for an item, then please add a brief explanatory note.

Activities	Completed	If "No" Please Explain
Select proper template [should be simple] for your project presentation.	**Yes**/No	
Your presentation should be separated in three parts: Introduction, Details and Conclusion.	**Yes**/No	
Is introduction added to the presentation?	**Yes**/No	
Is project requirement collection information added to the presentation?	**Yes**/No	
Is feasibility report information added to the presentation?	**Yes**/No	
Is project design information added to the presentation?	**Yes**/No	
Graphics, Images, Flowcharts etc. related to your project added to the presentation?	**Yes**/No	
Are tools and technology related to the project added to the presentation?	**Yes**/No	
Is the project timeline information added to the presentation?	**Yes**/No	
Is information regarding project code [You can include a hyperlink in your presentation which opens your code] such as environment and IDE used in project added in the presentation?	**Yes**/No	
Are workable application screenshots added in the presentation?	**Yes**/No	
Are advantages of your project added in the presentation?	**Yes**/No	
Is future possible work for your project added in the presentation?	**Yes**/No	

Activities	Completed	If "No" Please Explain
Is the conclusion added to the presentation?	**Yes**/No	
Is your presentation submitted to the facilitator?	**Yes**/No	
Feedback taken from the facilitator?	**Yes**/No	
Is the final presentation submitted to the facilitator within the given timeline?	**Yes/**No	