

**Course: WEB DEVELOPMENT**

**Major: Software Engineering**

**Level: Seniors, BTHS**

**Lesson Plan**

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## **Projects (Level 1) Sharing Session and Testing**

*Total Lessons: 2*

### **Prerequisite:**

- Completed Level 1 Project with design document

**Aim:** How can we test and assess software applications developed by others?

### **Learning Objectives/SWBAT:**

- Understand basic requirements for software quality assurance testing.

## **Lesson 1: Level 1 Project Peer Review and Reflection**

| <b>AGENDA</b>  | <b>QUESTIONS/CFUs/MISUNDERSTANDINGS/<br/>NOTES</b> |
|--|--|
| <b>DO NOW (5-7 MINS)</b><br>Students will open their Level 1 Project and prepare them for testing by classmates (SQA)<br>Files to be open: <ul style="list-style-type: none"><li>-Specification sheet</li><li>-Design document</li><li>-All programming files</li><li>-Run your program to be user ready</li></ul> |  |

**ACTIVITY 1 (25 min)****PROJECTS PEER REVIEW, USER INTERFACE (UI) TESTING AND REFLECTION.**

Each station has a Level 1 Project Peer Reflection Sheet to be filled by each student who reviews the program on this station. The sheet does not contain the name of the developer until after reflection is completed (to keep it unbiased)

Students review projects of their classmates for 6 rounds. First round 3-4 min, the rest 2 min each.

After 6 rounds students return to their own stations and read the reviews left by their classmates. They might read and think of them individually or they might discuss them with a neighboring student.

**REFLECTION ON REFLECTION (5 min):**

Students are being asked to reflect on the activity as both testers and developers.

Each student reviews 6 other projects based on teachers' request (move 4 stations to the right from your own station; move 1 to the right, move to the station symmetrical to your current station over the middle line of the classroom, etc.) Each round is timed. For the last round students choose the station for the reflection based on "first come-first served" rule.

Anticipated responses:

- Eye opening experience to see other students' projects

Expected responses:

- Reflection is not specific enough
- Not enough time provided for a thorough testing

**EXIT TICKET (5 min, gForm)**

Students rank three best projects and fill out google form where they identify computer number with the projects they like the most and the reasons for their ranking.

**1ST PLACE PROJECT NOMINEE IS BEING ANNOUNCED.**

**The rest of the results will be the next school day.**

## Lesson 2: Level 1 Project Quality Assurance Testing

| AGENDA  | QUESTIONS/CFUs/MISUNDERSTANDINGS/NOTES   |
|---|--|
| <b>DO NOW (5-7 min)</b><br>Students are given current job posting for different levels of Quality Assurance positions (entry level to supervisory one)  | Students look at companies' different fields and nature which require SQA specialists (software release to digital currency), range of duties and responsibilities, education and skills required for the positions. |
| <b>MINI LESSON (10 min)</b><br>SOFTWARE QUALITY ASSURANCE<br>PROCESS POWERPOINT PRESENTATION<br>Teacher welcomes "newly hired quality assurance team" to imaginary <i>BrooTech Soft Corporation</i> .<br>Teacher shows the scope of Quality Assurance process and identifies where the activities students are doing belong to (slide 4, Manual Testing, Functional).<br>Slide 5-6: A look at key components of Coherent Agile testing and Agile Software Development as approach and its principles. |  |

**ACTIVITY 1 (20 min)**

Students work on Software Quality Assurance testing of one project, looking at the program from 4 perspectives:

1. Basic functionality testing
2. Code review
3. Following the requirements
4. Conclusion with decision to release the software to the market or not.

Students are being asked to test and analyze the project on the computer station with the number 17 grader then their own computer number to exclude the testing of neighboring project which students might be familiar with since they worked on projects closely to each other.

**1st Place Nominee Project Presentation (5-7 min)**

Student ranked first from the first lesson presents the project to the class, demonstrates all the features and answer any questions students might have for the project.