Lesson 4.8: Assessment Exercises

Objectives

After completing this lesson, students will:

- Have an understanding of how much they learned and understood during Unit 4

Agenda

1. Student Activity: Assessment Puzzles	30 mins
2. Class Activity: Review Answers	20 mins

Preparation

- ❑ Print student activity worksheet (one per student)

Resources & Links

- ❑ None

1. Student Activity: Assessment Puzzles

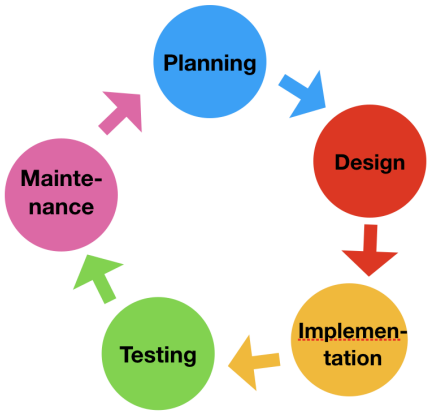
Distribute one worksheet per student. This is an assessment activity for material covered in Unit 3. Explain the activity to students. Leave enough time at the end to go over the answers.

2. Class Activity: Review Answers

Engage students in an interactive discussion and review of the answers to each of the exercises.

Solution to Student Activity:

1. Place each software development life cycle phase in the circles in the correct order. You can start with any circle and use the letters or the word for each phase.

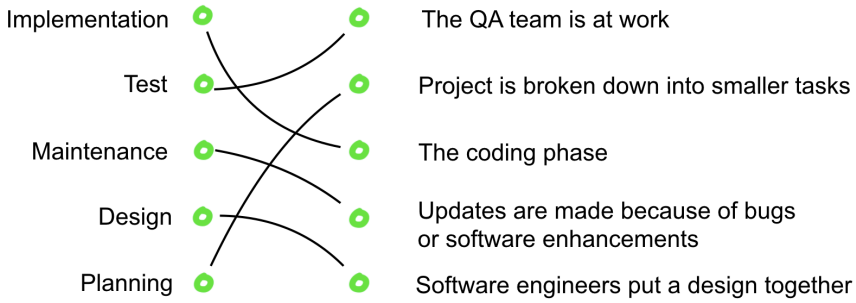


2. Check all statements that are true about designing and the design phase.

- ❑ The design phase happens after you have written the code
- ❑ QA is responsible to put the design together
- ❑ It is more expensive to change design documentation than code
- ❑ ✅Designing is important because software engineers had a chance to think about everything and get feedback from others.
- ❑ ✅Design documentation not only describes the design but it is also useful when writing test cases

3. Check all items that are the job of a QA engineer:
   - ❑ ✅Write a test plan
   - ❑ Create a software project design
   - ❑ ✅Write and run test cases
   - ❑ ✅Report all the bugs they found and what they did to find them
   - ❑ If it is a small bug, fix the code and not report the bug.

4. Connect the software phases on the left with phrases associated with them on the right.



5. Once the design phase is done it should not be changed because it would be too expensive.

   ✅False

6. Write 2 test cases for the following Fish Chasing Game. For each test case, say **what** will be tested and **how** it will be tested.

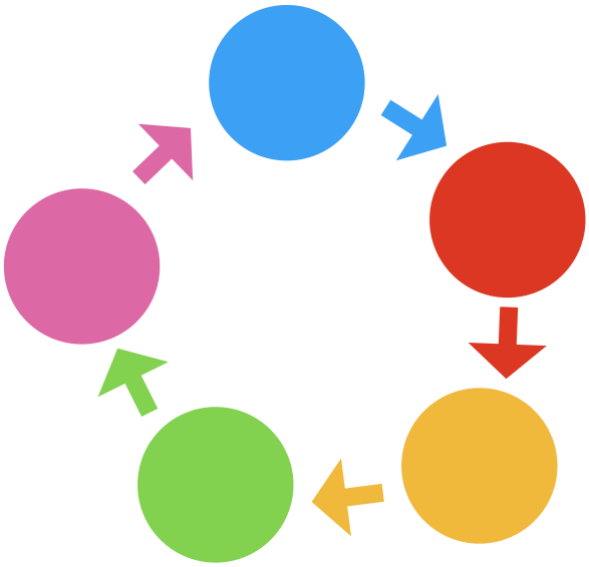
Test cases will likely be expressed in different ways and with subtle differences. The important thing is that students write down what and how something will be tested which is based on how the game was described.

Possible test cases given the specification:

1. Test that the shark follows the mouse. How: by moving the mouse around.
2. Test that eating a fish scores 1 point. How: move the mouse around until the shark eats (touches) a fish and check that the score increased by just 1.
3. Test that touching a starfish loses 1 point. How: move the mouse around until the shark touches a starfish and check that the score decreased by just 1.
4. Test that the timer works. How: Use a watch or a computer timer to check that after each second approximately the timer goes down by 1.
5. Test that the timer starts at 30. How: start the game and verify that the timer is set to 30 at the beginning.
6. Test 'congratulation' message to player. How: play the game and score more than a point by the time it ends and verify that a congratulations message is displayed.
7. Test 'try again' message to the player. How: play the game and score negative points by only touching starfish by the time it ends and verify that a 'try again' message is displayed.

Student Activity: Check Your Knowledge

1. Place each software development life cycle phase in the circles in the correct order. You can start with any circle and use the letters or the word for each phase.



A. Testing
B. Planning
C. Maintenance
D. Implementation
E. Design

2. Check all statements that are true about designing and the design phase.

- ❑ The design phase happens after you have written the code
- ❑ QA is responsible to put the design together
- ❑ It is more expensive to change design documentation than code
- ❑ Designing is important because software engineers have a chance to think about everything and get feedback from others.
- ❑ Design documentation not only describes the design but it is also useful when writing test cases

4. Check all items that are the job of a QA engineer:
   - ❑ Write a test plan
   - ❑ Create a software project design
   - ❑ Write and run test cases
   - ❑ Report all the bugs they found and what they did to find them
   - ❑ If it is a small bug, fix the code and not report the bug.

5. Connect the software phases on the left with phrases associated with them on the right.

Implementation	The QA team is at work
Test	Project is broken down into smaller tasks
Maintenance	Software engineers put a design together
Design	Updates are made because of bugs or software enhancements
Planning	The coding phase

6. Once the design phase is done it should not be changed because it would be too expensive.

- ❑ True
- ❑ False

7. Write 2 test cases for the following Fish Chasing Game. For each test case, say **what** will be tested and **how** it will be tested.

Object of the game: Score as many points as possible in 30 seconds of game time.

Game Specification (description):

1) Shark follows the user's mouse to eat fish
2) Eat a fish (touch it), score 1 point
3) Touch a starfish, lose 1 point
4) After 30 seconds, if the score > 0, the player is congratulated. If score < 0, the player is told to try again.

Test case 1: _____

_____

Test case 2: _____

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