

## **APDP201 – 01 September 2025**

### **Exercise: Testing, Debugging, and Agile Project Management in ASP.NET MVC Projects**

**1. During Sprint 1, your team skipped testing the application. According to Agile principles, what is the primary risk of proceeding to the next sprint?**

- A. Increased technical debt and hidden defects
- B. Reduced project scope
- C. Losing user stories in the backlog
- D. Overhead in sprint planning

**2. Which type of test should be prioritized after each user story is completed in an ASP.NET MVC project?**

- A. Unit testing
- B. Integration testing
- C. Load testing
- D. Security testing

**3. A controller action in an ASP.NET MVC app is failing intermittently. In Agile, who is responsible for identifying and reporting this during a sprint review?**

- A. Scrum Master
- B. Product Owner
- C. Development Team
- D. Stakeholders

**4. Which of the following best represents a definition of done (DoD) in the context of testing during sprints?**

A. Code is written and checked into the repository

B. Code is written, reviewed, tested, and passes all acceptance criteria

C. Code is written and deployed to production

D. Code is written and presented in sprint demo

**5. A student's ASP.NET MVC app throws null reference errors in the view. What is the best debugging approach within Visual Studio?**

- A. Use breakpoints in controller actions and inspect variables
- B. Add Console.WriteLine() to Razor views
- C. Delete and recreate the view
- D. Restart IIS and rebuild the solution

**6. When testing an ASP.NET MVC app after Sprint 1, what is the most Agile-aligned reason for writing automated unit tests?**

- A. To satisfy client requests
- B. To reduce time spent on regression testing in future sprints
- C. To increase project documentation
- D. To replace code reviews

**7. In Agile project management, if bugs are discovered after a sprint review, the most appropriate action is:**

- A. Add them to the product backlog for prioritization in future sprints
- B. Ignore them if the sprint goal is achieved
- C. Stop all development until they are fixed
- D. Reassign the sprint team

**8. Which testing method in an ASP.NET MVC app verifies that multiple layers (controller, model, database) work together?**

- A. Unit testing
- B. Integration testing
- C. Regression testing
- D. Smoke testing

**9. In Agile, why is it risky to skip debugging after Sprint 1?**

- A. It reduces the number of user stories
- B. It increases technical debt and may slow future sprints
- C. It shortens sprint duration
- D. It eliminates the need for sprint retrospectives

**10. You notice your team is rushing features without testing. Which Agile practice directly addresses this problem?**

- A. Daily Stand-ups to track progress and impediments
- B. Burn-down charts to track velocity
- C. Backlog grooming to remove tasks
- D. Sprint retrospective to identify process improvements

**11. Which debugging tool is most effective for tracking exception flow in an ASP.NET MVC application?**

- A. Visual Studio Exception Settings with breakpoints
- B. Response.Write() in Razor views
- C. Commenting out code sections randomly

D. Changing configuration files

**12. A student team delivered untested features. During sprint planning, how should the team address testing for the next sprint?**

- A. Include unit and integration testing tasks in the sprint backlog
- B. Ignore testing because it wasn't done previously
- C. Push all testing to the final release phase
- D. Focus only on UI improvements

**13. Which type of test would quickly identify if a newly implemented controller method breaks existing functionality?**

- A. Unit test
- B. Regression test
- C. Load test
- D. Smoke test

**14. In Agile, if testing takes longer than expected during a sprint, the best project management approach is:**

- A. Adjust scope or negotiate with the Product Owner
- B. Extend the sprint indefinitely
- C. Skip testing and deploy anyway
- D. Reassign developers to other unrelated tasks

**15. Which scenario demonstrates technical debt in a Sprint 1 ASP.NET MVC app?**

- A. Features delivered without proper testing
- B. User stories completed ahead of schedule

- C. Backlog items added for future sprints
- D. Unit tests passing for all controllers

**16. Which method ensures model validation logic is functioning correctly in ASP.NET MVC?**

- A. Writing unit tests for model classes
- B. Manually entering data in the view only
- C. Restarting IIS after deployment
- D. Updating NuGet packages

**17. During sprint retrospective, the team realizes bugs are found late in the process. The most effective improvement action is:**

- A. Introduce TDD (Test-Driven Development) in future sprints
- B. Skip sprint review meetings
- C. Reduce sprint length to fix bugs faster
- D. Delegate testing to external QA only

**18. When debugging an ASP.NET MVC app, you notice an action returns the wrong view. What is the most likely cause?**

- A. Incorrect return statement in the controller
- B. Missing JavaScript files
- C. Incorrect database schema
- D. CSS not loading

**19. Which Agile artifact helps track untested or failing features across sprints?**

- A. Product backlog and sprint backlog
- B. Use case diagrams
- C. Deployment logs

- D. Entity relationship diagrams

**20. Why should testing be integrated into every sprint rather than only at the end of a project?**

- A. To ensure incremental delivery of high-quality, working software
- B. To reduce the number of user stories
- C. To delay stakeholder feedback
- D. To avoid writing documentation

**21. During Sprint 1, no testing was done. Which Agile principle is being violated?**

- A. Working software over comprehensive documentation
- B. Responding to change over following a plan
- C. Customer collaboration over contract negotiation
- D. Continuous attention to technical excellence

**22. Which of the following is most important to track after Sprint 1 when apps were untested?**

- A. Burn-down chart progress
- B. Bug count and severity
- C. Number of user stories delivered
- D. Number of developers available

**23. Which tool can be used in Visual Studio to track exceptions without stopping the app?**

- A. Exception Settings window
- B. Console.WriteLine statements
- C. Output window only

D. Task Manager

**24. In Agile, who is responsible for ensuring testing is included in each sprint?**

A. Scrum Master

B. Product Owner

C. Development Team

D. Stakeholders

**25. Which type of test verifies that routing, controllers, and views are correctly linked in an ASP.NET MVC app?**

A. Integration test

B. Unit test

C. Load test

D. Security test

**26. After Sprint I, the team realizes many features are untested. Which project management action should be taken first?**

A. Add testing tasks to the next sprint backlog

B. Cancel the remaining sprints

C. Extend the sprint without approval

D. Skip retrospective to save time

**27. Which debugging approach best identifies logic errors in controller methods?**

A. Step-through debugging with breakpoints

B. Manual inspection of HTML in the browser

C. Restarting the web server

D. Commenting out lines of code randomly

**28. What is the most effective way to prevent regression errors in ASP.NET MVC apps?**

A. Write automated unit and integration tests

B. Manually test the application once after each sprint

C. Only test UI pages

D. Skip testing for non-critical features

**29. If a team discovers bugs late in the sprint, what Agile practice ensures continuous improvement?**

A. Sprint retrospective

B. Burn-down chart updates

C. Product backlog refinement

D. Daily stand-ups only

**30. In ASP.NET MVC, which is the most appropriate place to validate data before processing?**

A. Model using data annotations

B. View using HTML only

C. Controller with print statements

D. Web.config file