Unity

CERTIFIED
User
Programmer

Exam Objectives

Unity Certified User Programmer

The Unity Certified User Programmer certification exam will test the basics of C# programming within Unity software to create interactivity in games, apps, AR/VR, and other experiences. The exam objectives are aligned with current industry standards set by professionals and educators. Individuals will be expected to have at least 150 hours of Unity software use and training to obtain this certification.

Individuals who have earned the Unity Certified User Programmer certification have demonstrated mastery of the following skills:

1. **Debugging, problem-solving, and interpreting the API**
   - 1.1. Given an example of a debug log message, create the code that created the log message.
   - 1.2. Given a code clip and its associated error message(s), determine which object(s) is(are) null.
   - 1.3. Given a specific programming task requiring the use of a particular class in the API, determine the appropriate method and/or properties, arguments, or other syntax to use.
2. **Creating code**
   - 2.1. Indicate when and how to initialize and use variables inlcuding but not limited to the approritate use of all variable modifiers and data collections such as Arrays, Lists and Dictionaries.
   - 2.2. Given a list of keywords and syntax elements, construct a viable Function declaration.
   - 2.3. Given a code clip and a description of its desired result, identify the appropriate function to control or trigger a state including but not limited to the Animator Controller.
   - 2.4. Given a scenario where a specific type of input is required and the building blocks needed are provided, construct the necessary input listener including but not limited to the keyboard and touch input.
   - 2.5. Demonstrate when and/or how to use the various logic and flow control operators used in C# and Unity.
   - 2.6. Given a scenario, identify appropriate actions to take when a UI element reports a change.
3. **Evaluating code**
   - 3.1. Given a scenario about the need to manage an event function, determine the appropriate action to take including but not limited to the keyboard and touch input.

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3.2. Given a code clip that produces an error because of a variable whose data type is declared incorrectly, identify the error.

3.3. Given a code clip that produces an error because a function or variable is declared or used incorrectly (public/private mismatch), identify the error including but not limited to the use of Animation events.

3.4. Given a code clip containing a class definition, distinguish whether the class is an ECS class or some other type of class.

3.5. Given a set of code clips, recognize the clip that uses naming conventions that observe Unity naming standards.

3.6. Given a code clip (or a set of code clips), recognize the comments that accurately describe what the code is doing.

4. Navigating the Interface

4.1. Describe the purpose, features, and functions of the various Unity IDE windows.

4.2. Demonstrate how to change the default scripting IDE.

4.3. Given a scenario which includes the following, then create a functional state machine.

a. a limited portion of a gaming scenario

b. a set of animation clips

c. a list of property settings

4.4. Create and program a function state machine within the Unity Animator Controller including but not limited to the use of Animator functions syntax.

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