

## POST-CLASS LEARNING AND PRACTICE 2.4: MANAGE GAME PERFORMANCE

### Lesson Objective 2.4:

Manage game performance. *Topics:* CPU vs. GPU, Reach vs. HiDef.

### Additional learning resources:

#### MSDN®:

##### How to tell if you are CPU or GPU bound:

<http://blogs.msdn.com/b/shawnhar/archive/2008/04/07/how-to-tell-if-you-are-cpu-or-gpu-bound.aspx>

**Reach vs. HiDef:** <http://blogs.msdn.com/b/shawnhar/archive/2010/03/12/reach-vs-hidef.aspx>

**Selecting Reach vs. HiDef:** <http://blogs.msdn.com/b/shawnhar/archive/2010/07/19/selecting-reach-vs-hidef.aspx>

**What Is a Profile?** <http://msdn.microsoft.com/en-us/library/ff604995.aspx>

#### Other resources (books, e-reference):

**Difference Between CPU and GPU:** <http://www.differencebetween.net/technology/difference-between-cpu-and-gpu/>

**GPU vs. CPU Performance Video:** <http://www.youtube.com/watch?v=eH96JE-CnHw&feature=related>

**How Graphics Cards Work:** <http://computer.howstuffworks.com/graphics-card.htm>

**How Xbox 360® Works:** <http://electronics.howstuffworks.com/xbox-three-sixty.htm>

### Resources, software, and additional files if needed for this lesson:

1. A workstation with Windows 7®, Windows Vista®, or Windows XP®
2. Microsoft Visual Studio® or Microsoft Visual C# Express® (2008 or 2010)
3. XNA® Game Studio 2.0, 3.0, 3.1, or 4.0
4. Internet connectivity

### Student Activity:

#### Directions to the student:

Read the following scenario. Read the article, "What Is a Profile?" Follow the steps of the tutorial in Visual Studio available at the link provided. Note that the screenshots in the activity may appear differently on your system. Upon completion of the tutorial steps, answer the reflection questions.

#### Scenario:

Southridge Video is planning to create a video game to promote their new movie, *A Tale of Two Gamers*. The movie is about two high school students; one lives in a large city and the other lives in a remote village. They meet each other while playing as opponents in a variety of online role-playing games. The movie follows them as they become friends who decide to create their own video game that will change their lives forever.

The game being planned by Southridge Video relies heavily on graphics and allows users to choose from many different scenarios for game play. The designers intend to market to both Windows® and Xbox 360 users.

**What Is a Profile?**

*<http://msdn.microsoft.com/en-us/library/ff604995.aspx>*

**Selecting Reach vs. HiDef**

*<http://blogs.msdn.com/b/shawnhar/archive/2010/07/19/selecting-reach-vs-hiddef.aspx>*

**Content:**

1. Respond to the following questions:
  - a. Summarize the steps you completed to finish the tutorial.
  - b. Did you have any problems? If so, how did you solve them?
  - c. What did you learn about the Reach and HiDef profiles from the reading and the tutorial?
  - d. Why is this information important to game designers?

## **KEY 2.4: MANAGE GAME PERFORMANCE**

**Content:**

1. Answers will vary.