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| **AP Computer Science GridWorld Case Study (GWCS)** | |
| **GridWorld Lab 01**  **1-Day Minor Assignment** | **Compiling and Executing the GWCS**  **(Note this is explained assuming you are using the JCreator IDE)** |

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| **Lab Objectives** |
| Create a new project.  Compile a project.  Execute the GWCS project.  Examine the GUI environment of the GWCS. | |

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| **Lab Prerequisites** |
| **Completed ExpoJava Chapter 03**  Understand JCreator editing features.  Can compile and execute simple Java programs. | |

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| **Lab Sequence of Steps** | |
| **#** | **Actions** | | **Comments** |
| **01a** | **Find the GridWorld Case Study Folders and Files**  Browse to the following folder:  **LearnAPCS\APCS-Learning Units\APCS-03-Java Simple Data Types\Labs03**  This folder is displayed in **Figure 01a**.  **Figure 01a** | | All of the files that you need for this  **AP Computer Science** course are in  the **LearnAPCS** folder.  Each individual lab is completely contained in its own folder. The Word document with instructions (like this file) is in that lab folder as well.  Part of the name of the folder also indicates what kind of lab it is:  **GridWorld**  - *GridWorld Case Study*  **Graphics** - *Graphics*  **Text -** *Black & White**Text Only* |

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| **01b** | **Find the GridWorld Case Study Folders and Files**  Double-click the **GridWorldLab01** folder.  You will see the contents of **Figure 01b**.  **Figure 01b** | The **BugRunner.java** file is the program file that is used for this lab. There will be other files necessary to run any GridWord Case Study lab.  Several of these files have been compressed and zipped into a special **jar** (Java Archive) file called **gridworld.jar**.  The **GridWorldLab01.docx** file is this very Word Document which explains the lab requirements.  The **GWExercises01.docx** file is used at the conclusion to answer questions about this lab assignment. |
| **02a** | **Open the File View Window**  Open JCreator.  You will probably see the display in **Figure 02a.**  **Figure 02a** | The appearance of the JCreator windows may be different for various students. The picture display in Figure 02a shows the edit window for the entire width of the display.  There are other windows available for special purposes that did not apply for the early program examples.  The GWCS will create a project that benefits from a **File View** window. If your JCreator display does not show that window, this part of the exercise will make the **File View** window active. |

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| **02b** | **Open the File View Window**  Click on **View**.  A window opens, shown in **Figure 02b**.  Click **File View**.  **Figure 02b** | In the **View** window there are many options available. You only need to add the **File View** window. |
| **02c** | **Open the File View Window**  The **File View** window is now available and you are ready to start the first GridWorld Case Study program.  The appearance of your JCreator IDE should now be like **Figure 02c**.  **Figure 02c** | Right now the **File View** window is not very practical. Later in the lab exercise you will see some useful information.  The first lab exercise is quite simple and the **File View** window will not show much. With future lab exercises the complexity will increase and you will find that the **File View** window gives a nice organizational overview of all the files that are used by your project. |

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| **03a** | **The Graded Assignment**  There will be many GridWorld labs this year and all of them will start by setting up the project as you did at the end of Chapter 3.  While Chapter 3 has step-by-step instructions on creating, compiling and executing GridWorld projects, the GridWorld labs will not include these steps.  This assignment has 2 parts: |  |
| **03b** | **Part 1 – The 30 Second Challenge**  Part I is to repeat the steps at the end of Chapter 3 over and over again until you can go from the empty screen shown in **Figure 02c** to an executing GridWorld, shown in **Figure 03b**, in 30 seconds or less.  While this may seem tedious, it will save you countless frustrations on future GridWorld labs.  **Figure 03b** |  |

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| **03c** | **Part 2 – Complete the GWExercises01 Worksheet**  You will earn a grade at the conclusion of each GridWorld lab.  Sometimes the lab asks you to follow steps and observe behavior.  In such a case there will be an exercise sheet with short answer questions about the observation you made during the lab.  This is the case for the first 2 GridWorld Labs.  At other times you are expected to use the existing methods to create a certain output, alter the behavior of some objects or create brand-new objects. This will happen in future labs. |  |