White Box Testing

A. Review the software code.

1. The application is a console program written in the Java programming language.

a. The program has the following syntax errors:

1. No package specified. Added package blackjackapp; fixed it.

2. The method declaration for the showResults method is not found because the code before the method has an error. At line 104, the try block code in the playerTakesAHit() method is missing curly braces. And at line 105, the catch block has an erroneous semi-colon statement delimiter and it is also missing curly braces. Fix these faults and the declaration for the showResults method is valid at line 112.

3. Lines 65 and 104. The Readline function is deprecated. The NetBean’s Help states:  
“**Deprecated.** *This method does not properly convert bytes to characters. As of JDK 1.1, the preferred way to read lines of text is via the BufferedReader.readLine() method. Programs that use the DataInputStream class to read lines can be converted to use the BufferedReader class by replacing code of the form:*

DataInputStream d = new DataInputStream(in);

with:

BufferedReader d = new BufferedReader(new InputStreamReader(in));

3. The playerTakesAHit() method is missing a return value for the method’s return type of boolean.

2. After the syntax error were fixed, the build compiled and executed fine.

a. Here are the program’s run-time errors

1. When the program displays the user prompt: “Enter bet: “ and the user does not type any entry but presses the Enter key. The program stops with a run-time error displaying the error that occurred was it threw a NumberFormatException.

2. When the program displays the user prompt: “Enter bet: “ and the user enters the erroneous input of a negative number the handles the error by ignoring the entry and re-prompts to “Enter bet:” No explanation is displayed saying why the input was not accepted.

3. When the program displays the user prompt: “Hit or Stay: “ and the user types an entry of “0”, this stops the program. There should be instructions to the user informing of this way to quit the program.