Codeathon

You are going to develop a java program for kids which finds whether a planet is closer to the sun compared to earth or not.

1) **User Story 1:**
   As a middle school student, I want to have the ability to compare the planet name to Venus or Mercury so that I can check whether the planet is closer to the sun compared to Earth.
   Acceptance Criteria:
1) A display message "Please enter the name of the planet:"
2) Students should be able to enter a string value and hit enter/return without any error.
3) If the planet name is Venus or Mercury, display the following: 'PLANET_NAME' is closer to the sun compared to earth.
4) If the planet name is Earth, display the following:
   'PLANET_NAME' is your home planet.
5) If the planet name is anything else, display the following:
   'PLANET_NAME' is farther from the sun compared to earth.

2) **User Story 2:**
As a middle school student, I want to have the ability to play the planet proximity check game as many times as I want so that I can learn through repetition.

Acceptance Criteria:
1) **Precondition:** The system should check whether the student should have played the game at least once.
2) After the student checked for the planet's proximity at least once, ask the student the following:
   "Would you like to check the proximity to the sun for any other planet compared to Earth?"
3) If the student answers "yes", then display the message: "Please enter the name of the planet:"
4) If the student answers "no", then display the message: "Thanks for playing the planet proximity game. Good bye!"

Note:
1) use proper naming conventions
2) Create a package for your code if possible
3) Each check can be implemented as separate functions and called into your main function.

Team Structure:

Person 1:
1. Create a method which accepts the Scanner object as arg and displays the text and which returns the user input. Store the output from this method in a variable that can be used in other control structures.

Person 2:
1. Create a method which uses the input value set by method written by Person1.
2. Implement a switch control structure to check for the input value against Venus or Mercury or Earth or others and display the corresponding text message.

Person 3:
1. Create a method which Gets the student input whether they want to play again, and check if the response is yes or no.
2. Implement a if..else control structure to do the following:
   a) If yes, then set the boolean variable to true.
   b) If not, then set the boolean variable to false and display the goodbye message.
   c) Return the boolean variable.

Person 4:
1. Create another method which uses the boolean variable returned from the method written by person 3.
2. Use it as the condition for the do..while to let the user play the game at least once before displaying the question to play again or display the goodbye message.
3. The do–while loop in the method should call the methods written by person 1, person 2, person 3.

As a team:

1. Include all the methods in main() function in the class and run the program.
2. Create test scenarios (in excel or word) with expected output to test the complete code.

E.g.

Scenario	Expected Result
Student entered the value "Uranus" for the first time	Uranus is farther from sun compared to earth