Project: Blackjack

Write a program that allows a human user to play a simplified version of Blackjack against a computer opponent. The objective of this project is to use loops and IF-ELSE constructs. Create a java source file called **BlackJack.java**.

The simplified blackjack rules for your program are as follows:

- Don't worry about suits or face cards; "cards" will have values from 2-11, and all values are equally likely (that is, unlike a real blackjack game, there's no greater chance of drawing a card with value 10).
- Draw two cards for the player and display them.
- Draw two cards for the "dealer" and display one of them, keeping the other one hidden.
- Allow the player to "hit" as many times as he would like.
- If the player "busts" (gets a total over 21), the dealer automatically wins.
- Allow the dealer to hit as many times as he would like. Dealer should hit until he beats the player or busts.
- If the dealer busts, the player automatically wins.
- Assuming no one has busted, the player with the highest total wins. Dealer wins all ties.

```
Welcome to Mitchell's blackjack program!
You get a 6 and a 5.
Your total is 11.

The dealer has a 7 showing, and a hidden card.
His total is hidden, too.

Would you like to "hit" or "stay"? hit
You drew a 8.
Your total is 19.

Would you like to "hit" or "stay"? stay

Okay, dealer's turn.
His hidden card was a 3.
His total was 10.

Dealer chooses to hit.
He draws a 7.
His total is 17.

Dealer stays.

Dealer total is 17.
Your total is 19.

YOU WIN!
```

Deliverables:

1. **BlackJack.java** file
2. Psuedo-code of the logic of the Black Jack algorithm
3. Test Plan

Test Plan:

Expected output – expected test results against which the output of the test is compared.

Test Name	Test Description	Expected Results	Actual Results
Player Win	Player beats dealer in points	Player Wins	Player Wins
Dealer busts	Dealer goes over 21	Player Wins	Player Wins
Player Loses	Player gets beat by dealer	Player Loses	Player Loses
Player Ties	Player loses to dealer	Player Loses	Player Loses
Player hit	Player hits and goes over 21	Player Loses	Player Loses
Dealer hit	Dealer hits until beat player or reaches 17	Stops at 17	Stops at 17
Player quits	Player quits after 1st game	Game Over	Game Over
Player quits, not play	Player quits before 1st game	Game Over	Game Over

Rubric for Programming Project 3 – 80 points

Item	Points
Program file named and submitted as specified. Must submit .java file.	5
Code is commented throughout in algorithm-like style including comment Class and Method header block. Also over loops and If-Else	15
Appropriate choice of variable names and appropriate use of constants	5
Program layout and appearance (Coding style is clear and easily understood)	5
User prompts are in the correct order, and gives player clearly written instructions	5
Output is correct	10
Decisions are formatted correctly and make sense	10
Loops are executed correctly	10
Documentation of test plan submitted	5
Document program logic for algorithm in the form of pseudo code	10
Total	**80**