JAVA QAP 2

Problem #1:

Outputs for MyLine and MyPoint:

```
PS C:\Users\logan\Documents\semester 3 SD\Java QAP 2\Problem 1>  &
c71b21f8197da0b6e4fa60fc0514926e\redhat.java\jdt_ws\Problem 1_375d
Line length: 2.8284271247461903
Line gradient: 0.7853981633974483
Line string representation: MyLine[begin=(1, 2), end=(3, 4)]
Line 2 length: 2.8284271247461903
Line 2 gradient: 0.7853981633974483
Line 2 string representation: MyLine[begin=(5, 6), end=(7, 8)]
```

Problem #2:

Outputs for MyRectangle and MyPoint:

```
PS C:\Users\logan\Documents\semester 3 SD\Java QAP 2\Problem 1>  & 'C:\Users\logan\AppDa
java\jdt_ws\Problem 1_375d8a92\bin' 'TestMyRectangle'
Rectangle width: 4
Rectangle height: 2
Rectangle area: 8
Rectangle perimeter: 12
Rectangle string representation: MyRectangle[topLeft=(1, 2), bottomRight=(5, 4)]
Rectangle 2 width: 20
Rectangle 2 height: 20
Rectangle 2 area: 400
Rectangle 2 perimeter: 80
Rectangle 2 string representation: MyRectangle[topLeft=(10, 20), bottomRight=(30, 40)]
```

Problem #3:

Output for CreditCard:

```
PS C:\Users\logan\Documents\semester 3 SD\Java QAP 2\Problem 3
rkspaceStorage\2593519d03a8288acf910b0f2856ed6d\redhat.java\jd
Diane Christie, 237J Harvey Hall, Menomonie, WI 54751
Balance: $0.00
Credit Limit: $1000.00

Attempt to charge $200.00
Charge: $200.00
Balance: $200.00
Attempt to charge $10.02
Charge: $10.02
Balance: $210.02
Attempt to pay $25.00
Payment: $25.00
Balance: $185.02
Attempt to charge $990.00
Exceeds credit limit
Balance: $185.02
```

For this assessment, here are the answers to your questions:

1. **Hours Spent**:
   - **Problem 1:** 2 hours
   - **Problem 2:** 1 hours
   - **Problem 3:** 2 hours
2. **Online Resources Used**:
   - **My lectures**: As primary reference material for theoretical concepts.
   - **YouTube**: To visualize and clarify specific coding techniques and problem-solving approaches.
   - **Stack Overflow**: For troubleshooting, error handling, and optimization tips.
3. **Help from Friends**:
   - I did not need assistance from friends
4. **Help from Instructors**:
   - I did not ask the instructors for additional guidance.
5. **Difficulty Rating**:

- **Problem 1**: [Easy] – Feel confident that I can solve similar problems in the future with better understanding.
- **Problem 2**: [Medium] – I struggled a bit with MyPoint, but now feel more confident about applying it in future tasks.
- **Problem 3**: [Hard] – This was particularly challenging due to how the question was formatted on the document, but I've gained a much clearer understanding after a couple read throughs to get where I went wrong.