

Java Semester 3 (SD11)
QAP 2
Chelsea Slade (Mayne)
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Problem 1 Screenshot:

```
TestMyLine
Get Begin:
(1,3)
(1,2)
Set Begin:
(3,5)
Set End:
(1,2)
Get Begin X:
3
Set Begin X:
(6,5)
Get Begin Y:
5
Set Begin Y:
(6,2)
Get End X:
1
Set End X:
(2,2)
Get End Y:
2
Set End Y:
(2,1)
Get Begin XY:
6
2
Set Begin XY:
(5,2)
Get End XY:
2
1
Set End XY:
(2,3)
Get Length:
3.1622776601683795
Get Gradient:
2.819842099193151
toString:
MyLine[begin=(5,2),end=(2,3)]
```

Problem 2 Screenshot & class diagram:

```
TestMyRectangle
Get Top Left:
(1,4)
Set Top Left:
(2,3)
Get Bottom Right:
(4,2)
Set Bottom Right:
(5,1)
Get Height:
2
Get Width:
3
Get Area:
6
toString:
Rectangle height: 2 Rectangle width: 3 Rectangle area: 6
```

Rectangle
- topLeftPoint: MyPoint - bottomRightPoint: MyPoint
+ MyRectangle(new MyPoint topLeftPoint, new MyPoint bottomRightPoint) + MyRectangle(int x1, int y1, int x2, int y2) + getTopLeft(): MyPoint + setTopLeft(int x1, int y1): void + getBottomRight(): MyPoint + setBottomRight(int x2, int y2): void + getHeight(): int + getWidth(): int + getArea(): int + toString(): String

Problem 3 Screenshot:

```
student@admins-Air Java-QAP-2 % /usr/bin/env /Library/Java/JavaVirtualMachines/amazon
-corretto-11.jdk/Contents/Home/bin/java -cp /Users/student/Library/Application\ Suppor
t/Code/User/workspaceStorage/09db1d1027bd3f8f89184089c878e943/redhat.java/jdt_ws/Java-
QAP-2_b49c93e/bin CreditCardDemo
Diane Christie: 237J Harvey Hall, Menomonie, WI, 54751
Balance: $0.00
Credit Limit: $1000.00

Attempt to charge: $200.00
Balance: $200.00
Attempt to charge: $10.02
Balance: $210.02
Attempt to pay: $25.00
Balance: $185.02
Attempt to charge: $990.00
Exceeds credit limit
Balance: $185.02
student@admins-Air Java-QAP-2 %
```

Assessment Questions:

1. 5-6 hours approximately.
2. Lectures, Stack Overflow, W3 Schools.
3. Did not ask fellow students for help.
4. Did not ask instructors for help.
5. Problem 3 was more difficult but I learned a lot from it. I think I would be able to do the same type of problem again more quickly.