

# Northern Michigan University (Marquette Co, MI)

CS345-01-23W Android Programming (Andrew A. Poe) Name: \_\_\_\_\_

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Sunday 30 April 2023 7:00 P.M. EDT

1. Under what circumstances would you want to override an activity's `onStart()` method? Under what circumstances would you want to put code in `onStart()` rather than in `onCreate()`? Be specific in your answer. (Don't say something unuseful like "When the code has to run at the time of `onStart`" or something like that.)

2. Given the Kotlin class definitions below for a linked list and a linked list node:

```
class LL {  
    var head:LLN? = null  
}  
  
class LLN (w:String,n:LLN?) {  
    var word = w  
    var next = n  
}
```

Write the method in `LL`: `BackwardsA()` takes no parameters and returns nothing. It prints those words in the list beginning with `A`. The words must be printed in reverse order, with the word closest to the tail printing first and the word closest to the head printing last. Use recursion only; no loops.

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3. Write, in Kotlin, that portion of `onCreate()` in a secondary activity that identifies a button with a specific button in the layout, so that when it is clicked the activity ends and the number 12 is returned to the main activity.

4. I have the following method in Kotlin:

```
fun SecondLargest (A:Array<Int>):Int { ... }
```

This method finds and returns the second largest integer in the array. You may assume that the array is not empty and that there are no ties in the array.

Write the code for this method. Be careful not to go out of bounds.

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5. Write the Kotlin code that will open the image file ("http://philos.nmu.edu/captainamerica.jpg") and display it on a ImageView named CaptainAmerica.

6. Write the Kotlin code that will play the first 5 seconds of the national anthem. This song can be found at <http://philos.nmu.edu/anthem.mp3> .