

## Review for Final

Format of final:

1. Q&A, 21%
2. Program understanding (value of variable or screenshot), 28%
3. Programming, 51%

Resources:

IO\_xx: <http://www.cis.temple.edu/~jiang/cis1068a.ppt>  
Decision\_xx: <http://www.cis.temple.edu/~jiang/cis1068b.ppt>  
Loop\_xx: <http://www.cis.temple.edu/~jiang/cis1068c.ppt>  
Array\_xx: <http://www.cis.temple.edu/~jiang/cis1068d.ppt>  
String\_xx: <http://www.cis.temple.edu/~jiang/cis1068e.ppt>  
Object\_xx: <http://www.cis.temple.edu/~jiang/cis1068g.ppt>  
Method\_xx: <http://www.cis.temple.edu/~jiang/cis1068h.ppt>  
Attribute\_xx: <http://www.cis.temple.edu/~jiang/cis1068i.ppt>  
Search\_xx: <http://www.cis.temple.edu/~jiang/cis1068j.ppt>  
Sort\_xx: <http://www.cis.temple.edu/~jiang/cis1068k.ppt>  
Inheritance\_xx: <http://www.cis.temple.edu/~jiang/cis1068m.ppt>

Topics:

1. P277, P422: Method signature (Method\_9), and call (Method\_10-14)
2. P291: Parameter (Method\_31), and call (Method\_32-40)
3. P339-345: Object and array to return the change back to caller (Method\_49-51, midterm2\_1.b&1.c)
4. P277: Single value **return**, including **void** (Method\_58-59)
5. P296-298, P390-400: Static method (Method\_18-25, Method\_60-66, midterm2\_Part2), instance method (Attribute\_25,29, Quiz-7:Adder&compareTo, Midterm2\_part3).
6. P282-283: This
7. P589: Super (Inheritance\_25)
8. P389-390: **Instance** and **static variable** (public, static, final, etc., Attribute\_5,44,45).
9. P375-377, P384: **Constructor**, a special instance method (no return, public, class name, Attribute\_14-15, Quiz7: Adder, Midterm2\_Month) and **related call at initialization** (unknown, null, new, overloading, etc., Object\_8,12, Homework10)
10. P296-298: **Private and public modifier** (Attribute\_5, Inheritance\_48-51)
11. P578-579: **inheritance programming** (Inheritance\_14,21,33, Object\_19)
12. P606-607: Polymorphism programming (Inheritance\_38-41, 46)
13. P636-638: Abstract class (at least one abstract method) and Interface (all are abstract)
14. P302-305: **Accessor** and **mutator** (Attribute\_9)
15. P420-426: **Overloading** (Attribute\_40-43)
16. P582: Overriding (Inheritance\_14-15)
17. **String & char** (Character.isLetter, Character.isDigit, charAt, length, substring, indexOf, String\_7,14)

18. ToString (Attribute\_32-35, midterm2\_part3, Homework10\_ArrayOperation.java)
19. Array (initialization, Array\_5,6, 9-12, 27,28), e.g., min, max, avg, total, etc.
20. P541: Array linear search (also called sequential search) and binary search (Search\_11,15, Homework 11)
21. Insertion sort (Sorting\_8, homework 11)
22. Loop: problems (Loop\_25-31, 41-47, 70-75) with method (quiz 5, midterm2\_part1).
23. P151: Truth table and decision making (Decision\_10,14,19,27,29,31).
24. P52: I/O (IO\_9,14,17, 42), primitive data type (byte, char, int, long, double, Boolean), and arithmetic operations (IO\_46, 51,62)