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Period 1
AP CSA

ReadMe

- Allowed Syntax
  - Must have a semicolon at the end of each non-looping line
  - Understands int and String type
  - No spaces between variable name, operation, and assigned value
    - Ex: int a=5;
    - int a = 5; is nott allowed
    - Ex: String str1;
  - Can use following mathematical operators for numbers and int variables
    - +, -, *, /, %
  - Can set variables to have different values
    - Ex: int a=6;
      int b=8;
      int c=a+b;
      b=b*5;
      c=20;
  - Must have a space between print statement and expected output
    - If printing statement, must use quotes
      - Ex: print "hello world";
    - If printing a variable, do not use quotes
      - Ex: print a;
    - If printing a mathematical expression, do not use quotes
      - Ex: print a*5;
    - If printing a new line, use command printNewLine;
  - To comment, place // at the beginning of the line
  - To ask for user input, enter command: System.in
    - Ex: String h=system.in;
  - Can utilize if statements and while loops
    - Must enclose condition in parentheses
    - Condition can use any operation of ints or Strings
      - Can use >, <, == for ints
      - Can use .equals. for Strings
    - Open { bracket must be placed on same line as if statement declaration
    - Close } bracket must be alone on a new line

- Ex:
  ```
  if (a<b+1){
  print a;
  }
  ```
  - ■ Can use nested loops
    - Ex:
      ```
      String h="hello";
      String k="hello";
      while (a>b){
      print a;
      printNewLine;
      a=a-1;
      if (k.equals.h){
      print "inside inner statement";
      printNewLine;
      }
      }
      ```
- Types of Errors
  - Detecting duplicate variable declarations
    - Ex:
      ```
      int a=4;
      int a=7;
      ```
      → Will result in: "error: duplicate int variable a declared on line: 2"
  - Detecting unknown variable
    - Ex:
      ```
      int a=4;
      print a1;
      ```
      → Will result in: "error: unknown int variable a1"
  - Detecting incorrect syntax
    - Ex:
      ```
      boolean result;
      ```
      → Will result in: "error: unknown code on line: 1"