What is Java

Analysis

Design(top-down design) Piecewise refinement. Small pieces at a time

High Level programming language

Machine Language/Assembly code – middle portion between humans and CPUs .class (byte code)

JVM(Java Virtual Machine)

Byte code, syntax error, runtime error, logic error, bug

Grace Hopper

Keywords – reserved words (for, while),

Identifiers- what you name your objects/primitives

Variables, Statements, Blocks

Constants (literals) – starts with “final” characters in ‘ ‘

Assignment Statements – variable = blah

Primitive types – int, str, double

Type casting – save an int into a double int i = (int)d;

Arithmetic expressions – equasions + - / \* ++ --

\*precedence

String constants

Strings equality

Concatenation

String methods – indexOf, charAt,

New line and quoting – quotes insode quotes \

Programming style

2 types and uses

variable naming

named constants

Testing

Boundary conditions

Black box testing – random value testing without direction

White box testing – mostly like debugging and adding control code to verify its right etc

Input and Output

System.out.print()

System.out.println()

Scanner

JOptionPane

DecimalFormat

Terminology: prompt – ask a question

echo – print to console etc “repeat yourself”

whitespace -

delimiter - comma, space, pipe etc

Conditional Statements

If

If-else

If-else it else

Switch

Loop Statements

While

Do-while

For

Break, continue, exit

Condition-controlled loops – Boolean evaluation

Sentinal-controlled loops – based on value coming from user

Flag-controlled loops – i.e. ‘DONE’ flag controlling condition

Arrays

Arrays of primitive types

Creating

Imitialization

Indexing

Length

Index – a[3] where 3 is the index

Subscript – same as index a3

Element – the box in an array…itself