

IS 300 — Lecture 5

- ◆ What is source code, what is object code, and why care?
- ◆ What is horizontal software?
 - ✱ Licensing issues
 - ✱ Warranty issues
- ◆ What is vertical software?
- ◆ When should you purchase software and when should you have it custom developed?

◆ What is source code, what is object code, and why care?

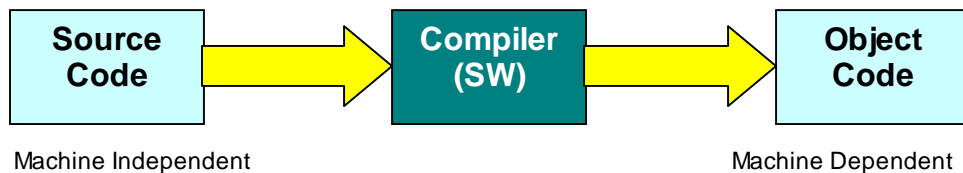
Source Code: the program in the language used by the programmer.

```
For I = 1 to 10
    Sum = Sum + Age(I)
Next I
```

Object Code: the program after it is converted to machine language.

```
0111001001010
1100100100111
1111000110111
```

Translation Process



Buyer/Seller Issues

Java and Java Virtual Machine (JVM)

◆ What is horizontal software?

- * Licensing issues
- * Warranty issues

General purpose (not industry or business function specific)

Types

- Spreadsheets
- DBMS
- WP

License – right to use (not ownership). Generally object code.

(see example license agreements)

Warranties

- Expressed – see license
- Implied (UCC)
 - ◆ Merchantability (does what one expects)
 - ◆ Fitness for a particular purpose (rely on vendor's recommendation and expertise)

◆ What is vertical software?

Single market or business function focus

Types

- Insurance sales system
- Dentist office patient records system
- Accounts payable system

Negotiations possible

- Both licensed and sold
- Sometimes object, sometimes source code

High variance in quality

- Good contract necessary
- References important

◆ When should you purchase software and when should you have it custom developed?

Advantages of purchasing

- Cost

PeachTree Complete (\$229 or lower)

- Reduces delays (off the shelf)

Still have training and conversion

- Quality

May be high

Can "test drive" it

- Resource issues

Can free up technical staff to focus on nonstandard, strategic systems

Disadvantages of purchasing

- Feature do not match requirements
- With poor fit, options are
 - Modify package (source/object code issues)
 - Live with problems
 - Modify the way company operates
- Options relating to modifying package
 - contract with original vendor
 - contract with a 3rd party
 - modify in-house
- Dependence on vendor
- Empirical research results (Peter Keen)
 - total life cycle cost of purchasing is **7 times** the original estimate
 - total life cycle cost of custom system development **underestimated** by a **factor of 4**.