Common Packages

(java.lang)

java.util ~ Containers
java.io
Signature

method's name, return type
& the names & types
of its parameters.
Assume we calculate cost differently for each type of equipment.

- Equipment
  - Serial Number
  - Cost

- Computer
  - \( \text{CPU} \times \# \text{ of Gbps} \)

- Router
  - Port
  - Bit Speed
  - Cost

\( \$100 \times \text{units} \)
Back in C

struct equip {
    int cost;
    int weight;
    int equip_type;
};

0 = computer
1 = projector
2 = swivel chair
Current = list->head

while (current != NULL) {
    // calc cost
    //
    current = current->next;
}

// all objects' costs have been set
examine

\textbf{current \rightarrow equip_type}

do the right thing

\texttt{switch (current\_equip\_type) \{ 
\texttt{case COMPUTER: \textit{calc\_comp\_cost}(-)};
\texttt{break; }
\texttt{case PROJECTOR: \textit{calc\_proj\_cost}(-)};
\texttt{break;}
\texttt{\}}

Back in Java kind

```java
    current = list.getHead();
    while (current != null) {
        current = current.cast();
        current = current.getNext();
```

Polymorphism
Equipment e_j // declared as object var (or a reference)  
but i haven't created an object.

e = new Computer();  
e = new Projector();  

// Compile error
Projector p = (Projector) e_j;  
Computer c = p; // Compile error