

Enumerated Types

1

Need...

Four volume levels associated with

High, Medium, Low, and Off

Want...

prevent using values other than these 4

Can I easily iterate through all values?

Simple "print"

2

Enumerated Types

Multiple related constants

Level: HIGH, MEDIUM, LOW, OFF

Each could be associated with an int value...

But, problems

Not "type" safe - `int val = MEDIUM;`

No easy way to print all constants

but could make `coin1 = 63; ??`

bypassing intended restrictions

3

Enumerated Types

```
public enum Level { HIGH, MEDIUM, LOW, OFF } ;
```

```
Level val = Level.HIGH;
```

```
• val = 3; //compile error
```

```
switch (val) {
```

```
case HIGH:
```

```
case MEDIUM
```

```
for (Level t : Level.values() )
```

```
something with t... t will be set to each value
```

4

Enumerated Types

Finally,

```
Level val = Level.HIGH;
```

```
System.out.println ( "Volume is at "+ val );
```

5

Enumerated Types

Can also add more...

Specific values to each enumerated value

i.e. Penny = 1; Dime = 10; Quarter = 25;

Becomes more like a class

requires constructors, methods, etc.

More later...

6