

Suppose the following lines of Java code:

```
Ant a = new Ant();
```

```
Ant b = new Ant();
```

```
House h = new House();
```

Draw the memory diagram showing the references and objects for these lines of code.

Now suppose we add the following lines:

```
Ant c = new Ant();
```

```
Ant temp = c;
```

```
c = b;
```

```
b = temp;
```

```
a = temp;
```

Show the appropriate changes in the memory diagram after each line is executed.

Write the Java source code for a class named Question1 that lives in a package named exam.

Given a class definition (Java Source Code), circle and identify the following:

- Class definition
- Class header
- Class body
- Class name
- Package declaration
- Package name
- Keyword
- Constructor definition
- Constructor header
- Constructor body
- Parameter list
- Argument list
- Method call
- Creation of an object
- Local variable
- Assignment statement

What is the scope of a local variable?

What is the difference between local variable dependency and instantiation dependency?

Draw the UML diagram for the relationship: Car uses a GPS. (instantiation)

Write the source code for the above relationship. (using local variable)