

# *Jeroo*

## Vocabulary





# Overview

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- In this presentation we will discuss:
  - What is Jeroo?
  - Where did it come from?
  - Why use it?
  - Essential OOP concepts



# What is Jeroo?

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- An environment for learning **object oriented programming. (OOP)**
- The Jeroo language is a small object-oriented programming language.
  - you create objects and then do things with them.
- Created in Java.



# Where did Jeroo come from?

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- NW Missouri State University
- It's free. [www.jeroo.org](http://www.jeroo.org)



# Jeroo

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- Place: Santong Island in the South Pacific
- Two unknown species
  - Jeroo: similar to the wallabies of Australia
  - Winsum Flower: Jeroo's source of food
- Jeroos
  - have a pouch to hold flowers
  - can't swim – fur gets waterlogged-must dry
- Humans arrive and set nets to catch Jeroos.



# The Jeroo environment

- The island is made of rows and columns.
- The programmer chose to number both the rows and columns starting with zero at the northwest corner of the island.

columns	0	1	2	3	4
rows 0	(0,0)	(0,1)			
1				(?)	
2					
3			(3,2)		



NORTH

What location is this?



# Essential Concepts

- **Program** – a set of instructions for the computer
- **Source code** – a program written by a programmer in a programming language
- **Compiler** – translates a program (or class) as a whole into another form such as **byte code** or **machine code**
- **Interpreter** – translates a program into machine language one statement at a time
- **Java Byte Code** – intermediate language created by the Java compiler. The JVM translates byte code into machine code.
- **Machine Code** – program in the form of binary codes - a series of 1's and 0's - that are understandable by the computer's CPU



# Essential Concepts

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- **Algorithm** – a plan for solving a problem
- **Syntax** – a set of rules for writing or speaking a language
- **Semantics** – the meaning associated with valid expressions



# Essential Concepts - OOP

- **Object** – represents a specific concept or item that is relevant to a problem to be solved. There are two parts to an object, facts about the object and tasks it can perform.
- **Attribute** – is a fact associate with a specific object
- **Behavior** – is an action an object can perform in response to a request from an external source



# Essential Concepts - OOP

- **Method** – a collection of statements that are written in some programming language to describe a specific behavior
- **Method Precondition** – something that is assumed to be true before the method is invoked
- **Method Postcondition** – something that is assumed to be true after the method has been executed



# Essential Concepts - OOP

- **Message** – a request for a specific object to perform a specific task

*When we ask an object to perform a task (behavior), we are sending a message to the object or invoking the method that describes the task.*



# Essential Concepts - OOP

- **Class** – is a collection of statements that are written in some programming language to describe both the attributes and the behaviors of an object.
- **Instantiation** – the process of creating a specific object.  
`Jeroo clyde = new Jeroo();`  
**clyde** is an instance of the **Jeroo** class.