

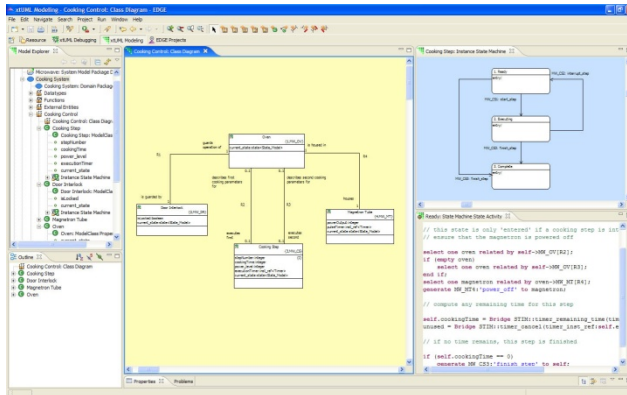
Framework

- ◆ **Eclipse framework**
 - **Uses Eclipse paradigm for consistency with other tools**
- ◆ **Collection of Plug-ins, packaged as Eclipse extension**
 - **Each release easily drops into existing Eclipse installation**
- ◆ **Extension points**
 - **Integrate with your own tools or those of other vendors**
 - **Extend the capabilities of BP**



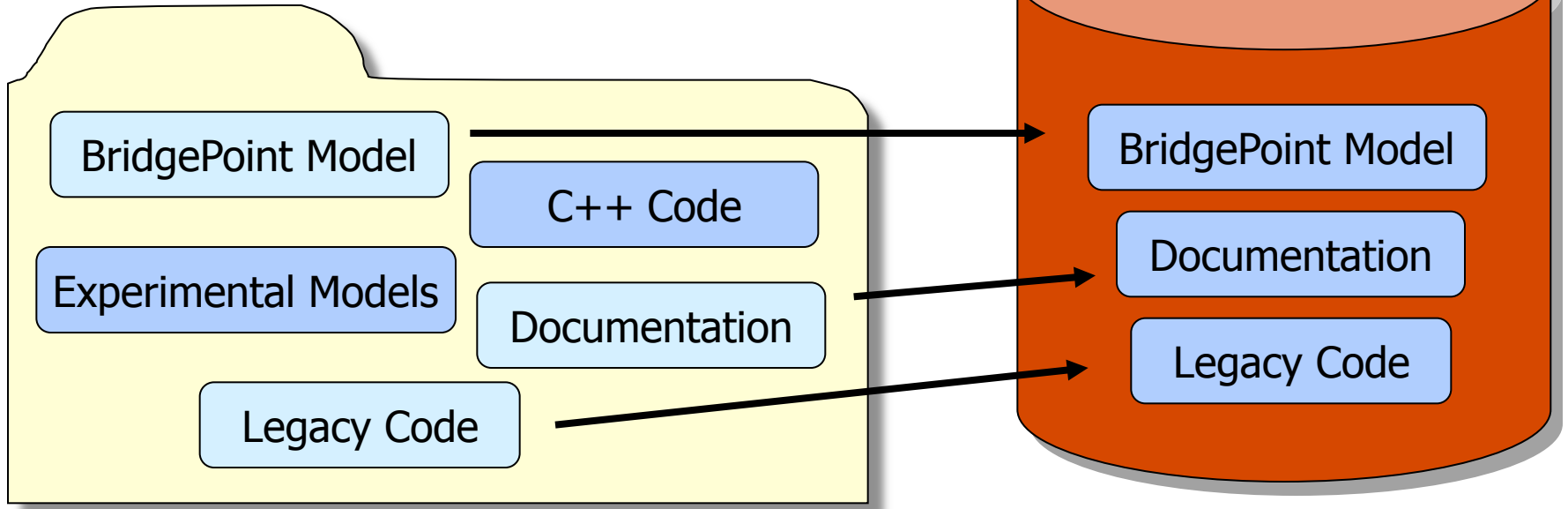
Eclipse terminology

- ◆ **Workspace** – a collection of projects
- ◆ **Project** – A container for resources
- ◆ **Resource** – files and folders in a project
- ◆ **View** – provides a way to navigate resources
- ◆ **Editors** – tools that operate on resources
- ◆ **Perspective** – a collection of views and editors designed to support a particular activity.

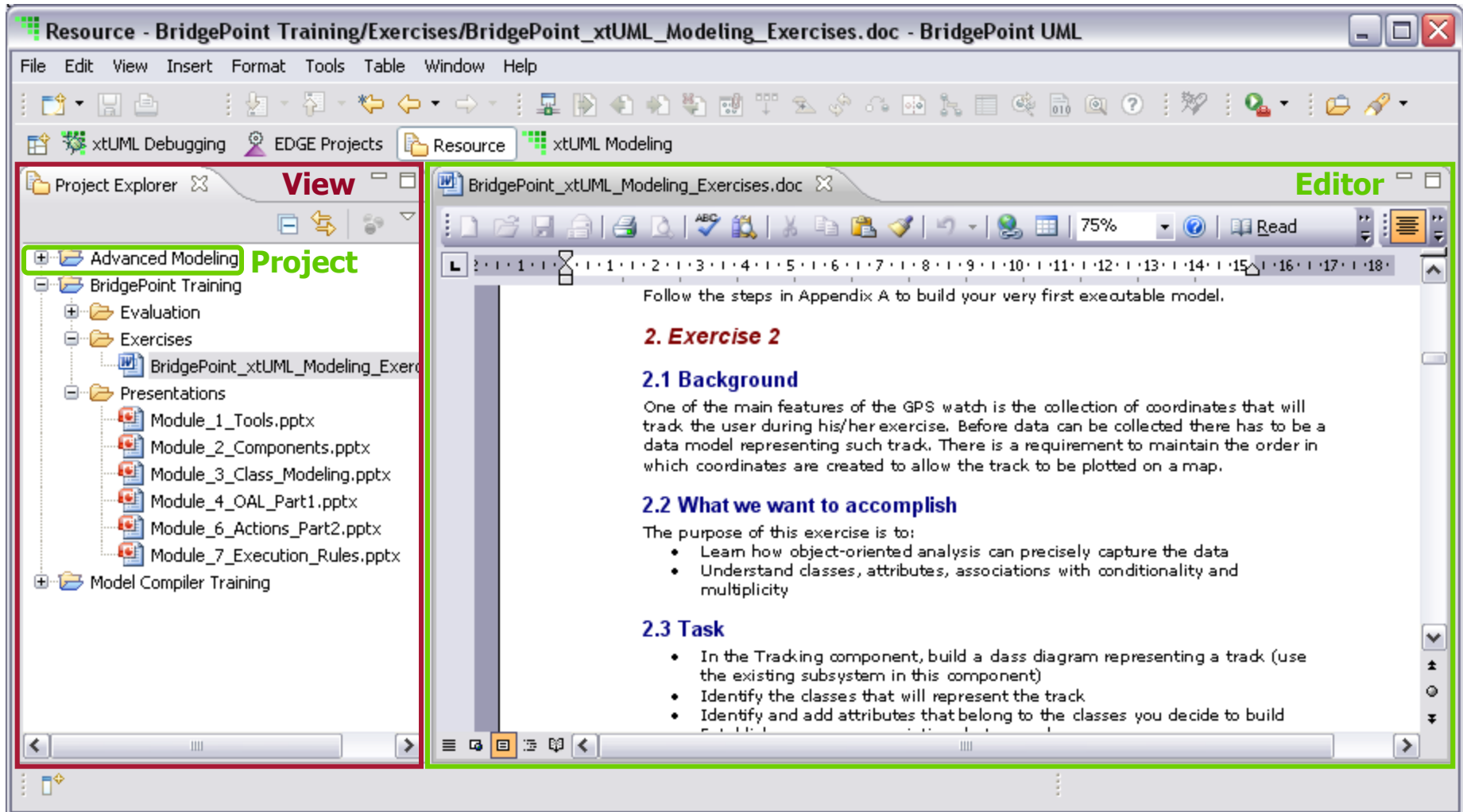


Workspace

- ◆ Work area for any set of projects
- ◆ Usually some directory in the file system
- ◆ The workspace is specified when Eclipse starts
- ◆ In this course, for instance, we may set the workspace to
 - `C:\training\workspaces\student`
 - All code will be saved in this directory



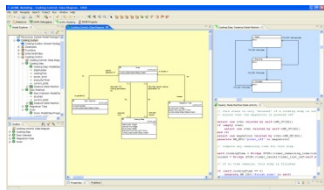





Projects, Resources, Views & Editors



Perspective

- ◆ **Each Eclipse session contains one or more perspectives**
- ◆ **Each perspective provides a set of functionality aimed at accomplishing a specific type of task or that works with specific types of resources**
 - **For example, the C/C++ perspective combines views that you would commonly use while editing C/C++ source files**
- ◆ **You might need switch perspectives frequently as you perform different tasks**

BridgePoint Perspectives

	Tool	Perspective
	Model Builder (UML)	 xtUML Modeling
	Model Verifier (x)	 xtUML Debugging
	Model Compiler (t)	 C/C++

xtUML Modeling

The screenshot displays the xtUML Modeling application window titled "System: Component Package Diagram - BridgePoint UML". The interface includes a menu bar (File, Edit, Navigate, Search, Project, Run, Window, Help), a toolbar with various modeling tools, and a breadcrumb trail (xtUML Debugging > EDGE Projects > Resource > xtUML Modeling).

The main workspace shows a Component Package Diagram with the following elements:

- UI**: A component at the top.
- Tracking**: A central component.
- Location**: A component on the left.
- HeartRateMonitor**: A component on the right.

Relationships in the diagram include:

- UI** depends on **Tracking** (indicated by a solid line with an open arrowhead).
- Location** provides **LocationProvider** interfaces to **Tracking** (indicated by solid lines with open arrowheads).
- Tracking** provides **HeartRateProvider** interfaces to **HeartRateMonitor** (indicated by solid lines with open arrowheads).

The left sidebar (Model Explorer) shows a project structure:

- GPS Watch
 - GPS Watch: System Model Package I
 - Analysis
 - HeartRateMonitorInterfaces
 - LocationInterfaces
 - UIInterfaces
 - System
 - System: Component Package Diagram
 - HeartRateMonitor
 - Location

The bottom-left pane (Outline) shows the selected component's structure:

- System: Component Package Diagram
 - HeartRateMonitor
 - Location
 - Tracking
 - UI

The bottom-right pane (Properties) displays the following information:

Property	Value
Basic	
Component Description	The Tracking component encapsulates the entire application software. Thi.
Component Name	Tracking
Multiplicity	One

xtUML Debugging

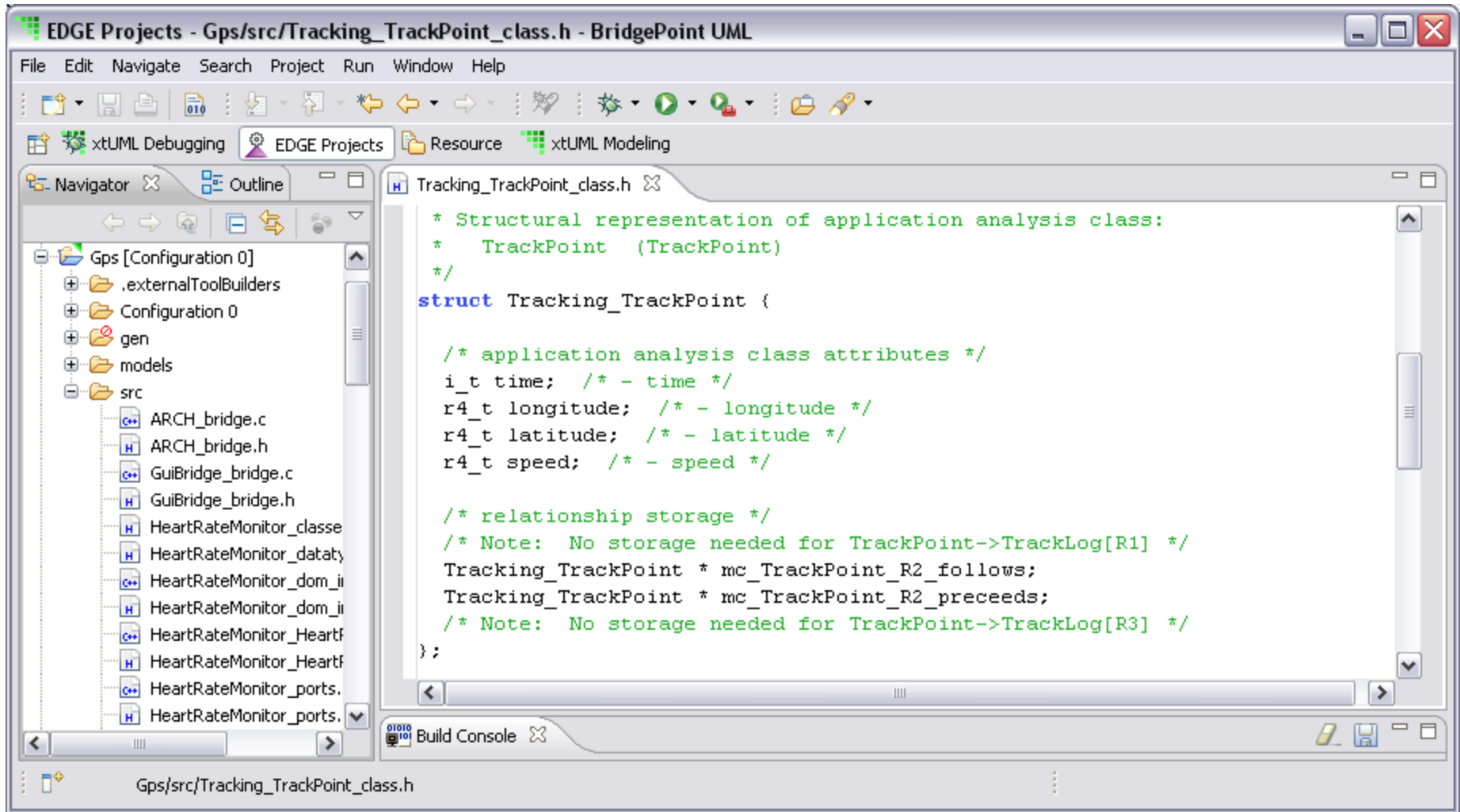
The screenshot displays the xtUML Debugging IDE interface. The main window title is "xtUML Debugging - System: Component Package Diagram - BridgePoint UML". The menu bar includes File, Edit, Navigate, Project, Run, Window, and Help. The toolbar contains various icons for file operations, navigation, and debugging.

The interface is divided into several panes:

- Debug Console (Top Left):** Shows a tree view of the debug session. The root is "Verifier [GPS Watch]". Underneath are "HeartRateMonitor (Suspended)", "Location (Suspended)", and "Tracking (Suspended Breakpoint at WorkoutTimer::stopped line: 5)". A sub-entry for "WorkoutTimer::stopped line: 5" is expanded, showing "WorkoutTimer2: lapResetPressed".
- Variables Panel (Top Right):** Displays a table of variables for the selected element. The table has columns for "Name" and "Value".

Name	Value
self	1:WorkoutTimer
time	0
- Component Package Diagram (Bottom):** Shows a UML diagram with components: "Location", "Tracking", "HeartRateMonitor", and "HealthRateMonitor". "Location" has two instances, "Location #1" and "Location #2", both connected to "Tracking". "Tracking" is connected to "HealthRateMonitor".
- Project Explorer (Bottom Left):** Shows a tree view of the project structure. The root is "GPS Watch", containing "HeartRateMonitor", "Location", "Tracking", and "Tracking". Under "Tracking" are "Display", "HeartRateSample", "LapMarker", and "Tracking".

Model Compiler



Lab 1: Exercise 1

- ◆ **Loading a pre-existing project from an archive file**