

Unit: Project Management
Topic: Scope Plans
Time: 2 classes

ICS 4U

Specific Expectations

B1.1 create a software project plan by producing a software scope document and determining the tasks, deliverables, and schedule;

Teacher Notes

Students work as a team to develop a software scope plan, decide on tasks and deliverables. Clarify to students that non-software projects also have scope plans. Comparisons need to be made between projects, products, and software development. A handout on the Product Life Cycle has been included for your use.

Students will be working through some of the stages of a project in this unit—scope plan, deliverables, tasks, project management tools, documentation, closing. Although portions of the activity could be programmed in the future, the project is not a software development project. Students can work through this unit on project management without a need to code. Group project idea—students develop publicity forms for small business; website, business cards, letterhead. In this lesson, students create the product scope document, list of deliverables and tasks.

Content/Student Notes

Day 1

- Handout: Product Life Cycle

Scope Plans

Scope plans are part of the defining requirement stage of project development. They give the team a clear vision of the final product and what is needed to get there. Scope plans are often updated through the project.

- **Project scope** includes requirements and specifications for the product scope. Also included are time, cost, and quality. The product scope describes the work to be done and who is going to do it.
- **Product scope** is a detailed outline about the product to be built or produced. For example, a second bridge over the Detroit River or software to track occurrences of the flu.
- **Software Scope Plan**
 - Job of project manager with input from coders, stakeholders, users
 - Problem Statement
 - Project background
 - Stakeholders—people most impacted by project
 - Users
 - Vision of solution
 - Vision statement
 - List of features
 - Features that will not be developed

Day 2

- **Deliverables**
 - Tangible and verifiable components
 - Meet needs of stakeholders
 - Each deliverable represents a different phase of project
- **Tasks**
 - Jobs or portions of project that produce the deliverables

Teaching Strategies

Day 1

- Check completion of career assignment. Students to submit to their career folder.
- Review product life cycle. The chart at the bottom of the diagram has been included to clarify the terms project, product, software.
- Note: Scope Plans.
- As a class, come up with a software scope plan for software to plan and put on a concert. See exemplar. This exemplar should be modified to meet the vision of the class. Distribute final version electronically.
- Students to work in groups of 4 to develop product scope plan. (If class is split with 4C make sure the groups are mixed.) Students take on various roles—stakeholder, project manager, software development team. Project manager should be a 4U student. Possible project idea—see teacher notes.

Day 2

- Each group presents their software scope plan. After the presentations, give students time for revisions before submitting for formative assessment.
- Note: Deliverables, Tasks
- Students read article on defining project deliverables—see resource list—to reinforce content.
- Groups revisit scope plan to set up list of deliverables and tasks to complete deliverables.

Activity

- Develop a product scope plan for a project. See details in attached activity sheet.
- Read article on defining project deliverables see resource list.
- Develop list of deliverables and tasks for project defined by scope plan.

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Resources

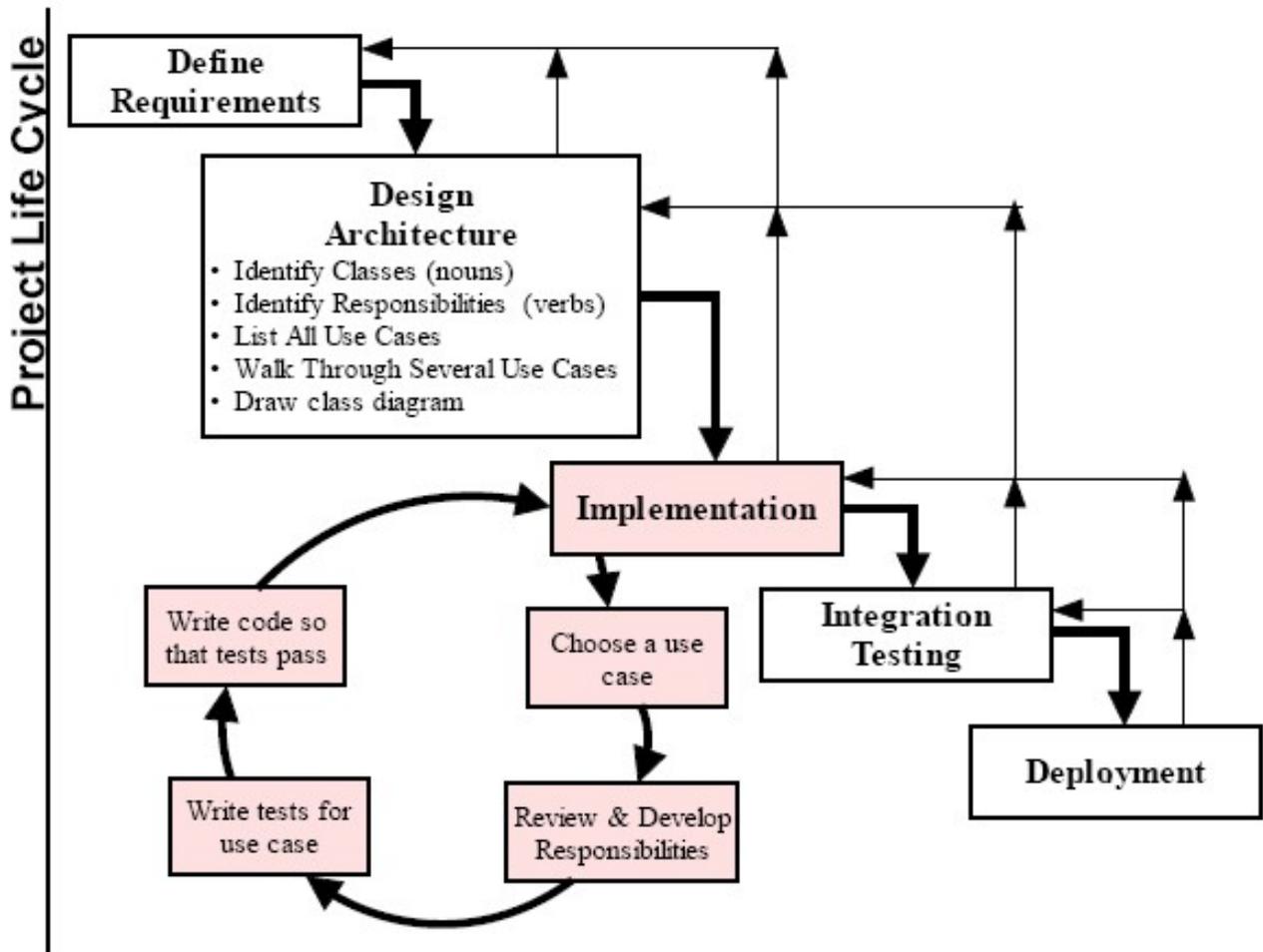
- Sample project outline by Mike Devoy:
<http://doyle.wcdsb.ca/ICS4M1/Project/Project%201.htm> Note: the course code will change for September, 2009.
- Handout: Product Life Cycle, from Byron Becker's presentation 2004 ACSE resources, Object Orientated Design Techniques, www.csteachers.ca
- Defining project deliverables,
<http://office.microsoft.com/en-us/project/HA010970121033.aspx>

Assessment

- ✓ Observation of task completion
- Formative assessment of software scope plan. See rubric.

Visual Aids/Equipment

- Electronic version of Software/Product Scope Plan and/or photocopy
- Electronic version of scope plan template and sample
- Photocopy: Product Life Cycle
- Overhead: Product Life Cycle



Project	Product Development	Software Development
A project is a large and major undertaking. It is a multi-task activity that has a beginning and end.	- is a project	- is a product
A project life cycle goes through the stages– project selection, initiation, planning, execution, monitoring, and completion		
Project scope refers to product specification adding in cost, time, and quality.	Product scope refers exactly to what is being built.	

Template: Scope Plan

Problem Statement

Project Background	Write a summary of problem. Give a reason for problem with its history if known. Have previous projects been attempted? Why should it be developed?	
Stakeholders	List names and title of each stakeholder.	Needs. Interview or brainstorm with stakeholders to help define their needs in the project.
Users	List names and title of each user if known.	Needs

Vision of Solution

Vision Statement	Describe what the team sees as the final product.	
List of Features		
Features not to be developed	List any features the team sees that could be developed in the future.	

Example: Software Scope Plan

A local software company has been asked to develop a software package that can be used by school groups to plan and put on a concert.

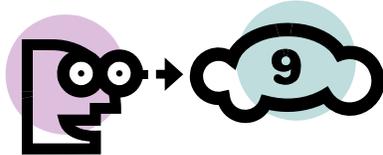
Problem Statement

Project Background	Groups within the school and school system are looking to plan and put on a concert. This is a yearly activity raising funds for the school itself.	
Stakeholders	Local high school parent council Local high school student council School Board School Administration Local municipal administration	Needs: Parent and student council –see Users School board and administration: activities well run, good community relations. Local municipal administration needs activities to be well structured and monitored. Local police need to be included in planning.
Users	Parent Council Student Council	Needs: Both groups plan a number of fundraising activities through the year. Software to organize the event(s) would reduce costs and scheduling issues. Managing the ticket sales and media events would improve with event software. Software needs to be flexible enough to extend to similar activities such as the school prom and drama presentations.

Vision of Solution

Vision Statement	The software development team, stakeholders, and users are looking to develop an application that tracks ticket sales, scheduling of activities in the event,	
List of Features	<p>Ticket sales</p> <p>Set up schedule Take down schedule</p> <p>Tracking of costs—band, sound system, police or security, food</p>	<p>Track sales—daily sales, income</p> <p>Student teams to setup and take down</p> <p>Teacher/student team to coordinate accounting of costs</p>
Features not to be developed	<p>Seating</p> <p>Photographer</p> <p>Media</p>	<p>Ticket prices according to seating</p> <p>Photographer—outsourcing or from photography/year book team. Include costs and income.</p> <p>Local newspaper, radio, TV to be coordinated to interview students, administration, performers.</p>

Unit: Project Management
Activity: Software Scope Plan



Each software development team contains a project manager, software developers, and at least one stakeholder.

As a team member, take on the role assigned to you by your instructor. Brainstorm with the team to develop a product scope plan for the problem (project) presented. If your group identifies other stakeholders, members of the group should take turns in a stakeholder role.

As a team, formalize the product scope plan. The software/product scope plan template may be used to record your plan. In the next class, you will present your scope plan.

The project manager is responsible to submit the final version of the software scope plan at the start of class tomorrow. Ensure that each member of the team has shared their email address. If the project manager is unable to be in class tomorrow, he/she will email the product scope plan to another member to submit to your instructor.

Remember, the software/product scope plan is needed to help everyone keep on track during the development of the project.

Activity: Software Scope Plan				
Category / Criteria	Level 1 (50%-59%)	Level 2 (60%-69%)	Level 3 (70%-79%)	Level 4 (80%-100%)
Understanding of Content Understands a software scope plan	Demonstrates limited understanding of software scope plans.	Demonstrates some understanding of software scope plans.	Demonstrates considerable understanding of software scope plans.	Demonstrates complete understanding of software scope plans.
Thinking Use of planning skills to develop a plan of approach to solve a problem	Uses planning skills to analyze a real-world situation with limited effectiveness.	Uses planning skills to analyze a real-world situation with some effectiveness.	Uses planning skills to analyze a real-world situation with considerable effectiveness.	Uses planning skills to analyze a real-world situation with high degree effectiveness.
Communication Expression and organization of ideas and information in written forms, including electronic forms	Expresses and organizes ideas with limited effectiveness.	Expresses and organizes ideas with some effectiveness.	Expresses and organizes ideas with considerable effectiveness.	Expresses and organizes ideas with high degree effectiveness.

Note: A student whose achievement is below Level 1 (50%) has not met the expectations for this assignment or activity.