Agile
Project Management
Sprint Planning

CompSci 408
September 10, 2014
## Significant Semester Requirements

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>15%</td>
<td>Participation: in-class, at meetings, setup meetings in timely manner, weekly status reports (individual grade)</td>
</tr>
<tr>
<td>15%</td>
<td>Writing: executive summary, project plan, design documentation (team grade)</td>
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<tr>
<td>15%</td>
<td>Deadlines: sprint deadlines met and meeting planning done in timely manner (team grade)</td>
</tr>
<tr>
<td>15%</td>
<td>User Testing: evidence users have tested, feedback report (team grade)</td>
</tr>
<tr>
<td>15%</td>
<td>User Friendly Design: easy, non-programming, way for user to change client data (team grade)</td>
</tr>
<tr>
<td>25%</td>
<td>Client Satisfaction: client consistently reports good progress (team grade)</td>
</tr>
</tbody>
</table>
Discussion Topics

• Project Management
  • Timeline with Milestones
  • Business Requirements
  • Documentation

• Sprints
  • Pre-Sprint Planning
    • Define tasks/stories and estimates
  • Sprint Planning

• Management vs. Leadership
Project Management

Timeline with Milestones
Business Requirements
Documentation
End User Guides (text/multimedia)
Technical Diagrams
Project Management

• **Timeline with Milestones**
  • What features? Available when?

• **Business Requirements**
  • User Stories, Context Diagram, Workflow Diagram

• **Documentation**
  • End User Guides (text/multimedia)
    • User, Install, Configuration, Admin
  • Technical Diagrams
    • Diagrams: Architecture, Class, Message Sequence, DB Schema
Timeline Example 1
Timeline Example 2

Gantt Chart for Project Progress

- Requirement Specification
- Programmatic Experimentation
  - Cross-platform Backend
  - Universal GUI Design
  - File Transfer Protocols
  - Database Schema
  - System Framework
  - GUI w/ wxWidgets
  - File Transfer
  - Platform-specific Code
  - Database Reporting
  - Testing
  - Final Documentation

Time Intervals:
- 02/11/08
- 02/21/08
- 03/02/08
- 03/12/08
- 03/22/08
- 04/01/08
- 04/11/08
- 04/21/08
- 05/01/08
- 05/11/08
Timeline
Example 3

March 2010
- Begin study of Greater Upper Marlboro Industrial Area
- Hired consultant
- Prepared existing conditions assessments

May 2010
- Business/Property Owner’s Interviews, June through August
- Prepared business and property inventory

May 2011
- Held workshop for business and residents on preliminary recommendations for road and stormwater improvements within the study area
- Refine recommendations based on feedback and finalize action steps needed for implementation

September 2011
- Second business and community workshop

December 2011
- Finalize Study
Recap: Project Management

• Project Management
  • Timeline with Milestones
  • Business Requirements
  • Documentation
    • End User Guides (text/multimedia)
    • Technical Diagrams
Sprints

Pre-Sprint Planning
Define tasks/stories and estimates
Shrink tasks

Sprint Planning
Pre-Sprint Planning

• Define the **stories**
• Estimate the **tasks**
  • Break **Requirements** into **Tasks** for each Product **Backlog** item in the **Sprint**
  • Break the requirements into tasks.
• **Shrink Tasks** to Improve the Task-Based Burndown.
  • **Small Tasks** to burn down mean a good, informative task-based burndown chart
Sprint Planning

• Goal: Product Owner and the team to negotiate what should be accomplished during the sprint

• Set the Sprint Budget
  1. Calculate the team’s Sprint Budget (total available work hours)
  2. Make any reasonable deductions for time that team members will not be able to spend working on the Sprint. Holidays, meetings, other projects, support, etc.

• Establish Stable Velocity
  • Use your normal sprint planning process for each sprint until you can demonstrate stable velocity

• Build the Sprint
  • Add tasks to satisfy the Sprint Budget and velocity
  • Identify stretch tasks to cover times when the team under-commits or over-estimates
Calculating Velocity

- Velocity is how fast you are developing software
  - In Scrum, how much product backlog effort a team can handle in one sprint

- Example: 5 person team committed to 25 story points in 2 week sprint

<table>
<thead>
<tr>
<th>Team Member</th>
<th>Robert</th>
<th>Ajay</th>
<th>Salman</th>
<th>Richard</th>
<th>Ben</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours Worked</td>
<td>16</td>
<td>10</td>
<td>14</td>
<td>16</td>
<td>14</td>
<td>70</td>
</tr>
</tbody>
</table>

- The team delivered software worth 25 story points in 70 hours.
JIRA

- Manage project tasks in the context of the Agile Scrum Method
- **JIRA Project**
  - Repository for all issues (features, defects, tasks)
- **Agile Board**
  - Manage Sprints
  - Organize Tasks into Sprints
    - Estimate and assign tasks
    - Schedule tasks
  - Track Progress using reports
    - Burn Down Chart
Recap

• Define stories - Estimate tasks - Shrink Tasks
• Goal: negotiate what should be accomplished
• Set Budget - Establish Stable Velocity - Build the Sprint
• Calculate Velocity (how fast you are developing)
• Manage project tasks in the context of the Agile Scrum Method
• JIRA Project: Repository for all issues
• Agile Board:
  • Manage Sprints - Organize Tasks - Track Progress
Management vs. Leadership

“You manage things; you lead people.”

~ Rear Admiral Grace Murray Hopper
Why Leaders?

• “Workers” need “Managers” not to just assign tasks but to define purpose
• “Managers” must lead not just manage
• “Managers” must organize workers:
  • not just to maximize efficiency
  • but to nurture skills, develop talent, and inspire results
## Management vs. Leadership

<table>
<thead>
<tr>
<th>Manager...</th>
<th>Leader...</th>
</tr>
</thead>
<tbody>
<tr>
<td>administers</td>
<td>innovates</td>
</tr>
<tr>
<td>maintains</td>
<td>develops</td>
</tr>
<tr>
<td>focuses on systems and structure</td>
<td>focuses on people</td>
</tr>
<tr>
<td>relies on control</td>
<td>inspires trust</td>
</tr>
<tr>
<td>has a short-range view</td>
<td>has a long-range perspective</td>
</tr>
<tr>
<td>asks how and when</td>
<td>asks what and why</td>
</tr>
<tr>
<td>has his/her eye on the bottom line</td>
<td>has his eye is on the horizon</td>
</tr>
<tr>
<td>imitates</td>
<td>originates</td>
</tr>
<tr>
<td>accepts the status quo</td>
<td>challenges the status quo</td>
</tr>
<tr>
<td>is the classic good soldier</td>
<td>is his or her own person</td>
</tr>
<tr>
<td>does things right</td>
<td>does the right thing</td>
</tr>
</tbody>
</table>
Recap

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