**SCRUM PROCESS MANAGEMENT**

To successfully manage your project, your team needs to do the following:

* Create a work plan from the backlog (prioritized bug/enhancement list) that can be completed in one two-week scrum cycle.
* Frequently give progress updates in short scrum meetings.
* Demonstrate a working version of the product at the end of each scrum cycle.
* Submit a work plan with work completed and resources consumed, and work not completed with an explanation.
* Submit the end-of-cycle report.

Creating effective reports and making effective presentations count towards key objectives in this course. Each of your team members MUST have an opportunity to write one of the end-of-cycle reports. You should choose 2 team members whose role for each cycle includes the end-of-cycle report responsibility.

**YOUR REPORT (all in one document, to be submitted TWICE -- once after the work plan is complete and once at the end of the cycle) will include 3 sections and answer the following technical questions:**

**At the start of a scrum cycle**

1. What bugs or enhancements will be included in the next product release?
   1. Issues #1, #2, #3, #5, #6, #7, #9, #11, #12, #13, #14, #15 AND #16
2. Who will work on each bug fix or enhancement implementation?
   1. Brandon: #1, #11, #16
   2. Chris: #7, #9
   3. David: #14, #15
   4. Kyle: #13
   5. Mark: #5, #6, #12
   6. Will: #2, #3
3. What resources will be required to complete the bug fix or enhancement implementation?
   1. Time
4. How will successful bug fixes or enhancement implementations be demonstrated?
   1. Bug fixes will be demonstrated by features being present and working to an extent during manual testing.

**During a scrum cycle (I would suggest you update the report during your 2-week cycle)**

1. What progress has been made on product development?
   1. Audio is complete.
   2. Custom Info screen shows
   3. New map made
   4. Custom Icons
2. What obstacles have been encountered?
   1. Time
   2. Getting the JSON parsing working

**At the end of a scrum cycle**

1. What bugs have been fixed or enhancements implemented?
2. What bugs have not been fixed or enhancements not implemented?
3. What resources were consumed?
4. How can the product development process be improved?

You must provide answers to these questions in a manner that would be useful for a project manager (in this case, your TA/professor) to keep upper management and the client informed.

The TA/professor will use your team’s reports to answer the following questions:

1. Can your team competently plan a scrum cycle?
2. Can your team frequently make and report progress toward completing the plan?
3. Can your team reflectively analyze the team’s process and recommend improvements?
4. Are you and the other team members able to work together effectively?

**LEARNING OBJECTIVES FOR THIS ASSIGNMENT**

While working on this assignment, focus on developing your ability to perform these technical tasks:

1. Create a work plan for a scrum cycle.
2. Breakdown backlog items (bugs and enhancements) into work units.
3. Assign work units to team members.
4. Estimate time needed to complete a work unit.
5. Create short-term work unit objectives.
6. Analyze work performed on work units.
7. Maintain (update and adjust) work plan during a scrum cycle.
8. \*\* Demonstrate completed work units (bug fixes and enhancements).
9. Analyze individual and team performance.
10. \*\* Identify the key technical information about product development that the project manger wants when reporting to upper management and the customer.

Focus also on developing your ability to perform these communication tasks:

1. Write a report that helps managers make practical decisions efficiently. [Writing]
2. Write a report that builds a manager’s confidence in your team’s technical and communication abilities. [Writing]
3. Write a report that persuades mangers to accept your recommendation. [Writing]
4. \*\* Select key information from written report useful to the project manager. [Speaking]
5. \*\* Create an informative and useful presentation for the project manager. [Speaking]
6. \*\* Demonstrate trustworthy technical expertise and communication skills. [Speaking & Teaming]
7. \*\* Deliver your presentation in a professional manner that supports achievement of your goals. [Speaking & Teaming]
8. Collaborate effectively on a software development team. [Teaming]
9. Organize and execute a meeting with the project manager and the software development team. [Teaming]
10. Develop knowledge of individual team member skills and trust among team members. [Teaming]

\*\* = we will not work on these objectives during the first 2 week Scrum cycle

**ASSIGNMENT SCHEDULE**

Scrum Cycles: 1 – Mon, April 13 to Sun, April 26

2 – Mon, April 27 to Sun, May 10

3 – Mon, May 11 to Sun, May 24

Demo to Client: May 19

Final deliverables: May 24

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| --- | --- |
| First Tuesday : | Select *Scrum Master* for this cycle.  Select backlog items from Prioritized GitHub issues for this cycle.  Define *work units* of smaller issues if necessary for each backlog item.  Assign work units to team members.  Estimate time for each work unit. |
| First Thursday and  Second Tuesday/Thursday: | 10 minute Scrum Meeting (Stand Up)  Run by Scrum Master  Each team member reports on progress on assigned work unit.  What did you do since the last scrum meeting?  What obstacles are you encountering?  What do you plan to accomplish by the next scrum meeting? |
| Sunday: | Submit completed end-of-cycle report.  Update backlog (make sure to close out/resolve issues on GitHub, or add new issues that arose)  Each person must complete team feedback forms. |
| First Tuesday class after cycle | \*\*5 minute demo of product  What work units were completed?  What work units were not completed?  Brief explanation for each work unit not completed. |

**ROLES AND RESPONSIBILITIES**

**Scrum Master (each team member must be Scrum Master for one week)**

Run scrum meetings

Create and update work plan

Work unit assignment

Work unit time estimates (from team member(s) assigned work unit)

Update backlog

Complete and submit end-of-cycle report (done by the 2 team members that are Scrum Masters that cycle)

**Team Members**

Select backlog items (with Scrum Master)

Define work units for backlog items

Estimate time for each work unit

Develop test plan for each work unit

Report at each scrum meeting

Demo completed work unit

Explain not-completed work unit

Team feedback form

**GRADING CRITERIA**

The grading criteria for your team’s written report and \*\*presentations are presented in the attached rubrics

Scrum Process Management

**Technical Rubric**

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| --- | --- | --- | --- | --- | --- | --- |
| **TECHNICAL ABILITIES** | | **EVIDENCE EXAMINED TO EVALUATE YOUR TECHNICAL ABILITIES**  (Note that your present your evidence in your report) | | | | |
| **Ability** | **Details** | **Report  Phase** | **Done Well** | **Rating and Comments** | **Needs Improvement** | **Points** |
| **Create a work plan** | Select backlog items to be completed in scrum cycle.  Break backlog items (bugs and enhancements) into work units.  Assign work units to team members.  Estimate time needed to complete a work unit.  Create a test for each backlog item | **Before Scrum Cycle** | Lists top priority backlog items that can be completed in on cycle.  Work units are independent and together complete a backlog item.  Work units are assigned to all team members. Assigned work units can be completed in one cycle.  Lists a time estimate for each work unit. Time estimate can be persuasively defended.  Verifies successful bug fix or enhancement implementation. |  | Omits top priority backlog items, or lists too few or too many items.  Work units are not independent or do not complete backlog item.  Some team members do not have assigned work units, or have too little or too much for on cycle.  Omits time estimates for work units. Time estimate cannot be persuasively defended.  Omits critical components of successful bug fix or enhancement implementation. |  |
| **Manage product development progress** | Create short-term work unit objectives.  Analyze work performed on work units.  Maintain (update and adjusts) work plan during a scrum cycle. | **During Scrum Cycle** | Lists work units to be complete over a time period. Objective can be persuasively defended.  Reports work completed on work unit objectives. Identifies obstacles that impede progress.  Lists work units with amount of progress completed toward completion and identified obstacles on work unit objectives that have fallen behind. |  | Omits work units to be completed over time period. Objectives cannot be persuasively defended.  Fails to report progress toward work unit objectives. Cannot identify obstacles impeding progress.  Omits progress on work units or fails to identify obstacles on work unit objectives that have fallen behind. |  |
| **Complete product development cycle** | Demonstrate completed work units (bug fixes and enhancements).  Explain work units not completed.  Submit completed report.  Update backlog. | **End of scrum cycle** | Team member(s) demonstrate completed, assigned work units.  Team member(s) persuasively explain not-completed, assigned work units.  List all completed and not-completed work units with any process improvements suggested.  Complete items resolved from Prioritized Bug/Enhancement List and not-completed items and new items added and prioritized. |  | Team member(s) fail to demonstrated completed assigned work units.  Team member(s) fail to persuasively explain not-completed, assigned work units.  Omits completed or not-completed work units.  Completed items not resolved, not-completed items not added, new items not added, or list not prioritized. |  |
| **Evaluate product development process (Team feedback form)** | Analyze individual performance.  Analyze team performance. | **End of scrum cycle** | Identifies key areas of individual performance that worked well and areas that did not work well. Proposes effective ways to improve individual performance.  Identifies key areas of team performance that worked well and areas that did not work well. Proposes effective ways to improve team performance. |  | Omits key areas of individual performance that work well or did not work well. Fails to propose effective ways to improve individual performance.  Omits key areas of team performance that work well or did not work well. Fails to propose effective ways to improve team performance. |  |

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**COMMUNICATION RUBRIC**

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| --- | --- | --- | --- | --- | --- | --- |
| **COMMUNICATION ABILITIES** | | **EVIDENCE EXAMINED TO EVALUATE YOUR COMMUNICATIONS ABILITIES**  (Note that your present your evidence in your report) | | | | |
| **Ability** | **Details** | **Comm Skill** | **Done Well** | **Rating and Comments** | **Needs Improvement** | **Points** |
| **Report helps project manager make practical decisions efficiently.** | *Provides critical information useful to the reader*  *Critical information is easily accessible to the reader*  *Concise and appropriate writing style for project manager* | **Writing** | *Contains all information useful to the reader and none that is not useful*  *Uses text formatting, organization (e.g., headers), and graphic devices (e.g., lists and tables) that makes information easily accessible to the reader*  *Uses style and tone appropriate for the workplace* |  | *Useful information is missing or not useful information is included*  *Fails to use formatting, organization, or graphics that makes information accessible to the reader*  *Uses informal style and tone that is inappropriate for the workplace* |  |
| **Report builds project manager’s confidence in team’s technical and communication abilities.** | *Uses precise terms appropriate for the reader*  *Provides accurate and precise explanations*  *Uses credible evidence to support explanations*  *Uses correct and appropriate spelling, grammar, etc.* | **Writing** | *Uses terms and concepts familiar to the reader, or explains unfamiliar terms or concepts*  *Key findings are accurately and precisely explained*  *Uses evidence from program review to support key findings*  *Uses correct spelling, grammar, etc. throughout report* |  | *Misuses terms or concepts or uses terms or concepts unfamiliar to the reader without explanation*  *Key findings are explained inaccurately or imprecisely*  *Fails to used evidence from program review to support key findings*  *Several spelling, grammar, etc. errors in report* |  |
| **Report persuades project manager to accept your recommendation.** | *Integrates and interprets findings*  *Persuasively describes development plan* | **Writing** | *Provides a summary that prioritizes and integrates individual findings and synthesizes an interpretation*  *Provides a development plan that recommends actions that are supported by key findings* |  | *Summary lists without prioritizations or fails to synthesize individual findings*  *Development plan that is does not recommend actions or is not supported by key findings* |  |
| **Select key information from written report useful to the project manager** | *Select information the demonstrates key features of program operation*  *Select information that demonstrates significant problems encountered*  *Select information that demonstrates significant bugs*  *Select information that synthesizes the current project state*  *Select information that recommends plans for program development* | **Speaking** | *Concisely and accurately demonstrates key features of the program operation*  *Concisely and accurately demonstrates significant problems that define the current state of the project*  *Concisely and accurately demonstrates significant bugs that define the current state of the project*  *Concisely and accurately synthesizes the current state of the project*  *Concise and accurate recommendations for program development* |  | *Selected features are incomplete or redundant*  *Significant problems are missing, insignificant problems are included, or irrelevant problems*  *Significant bugs are missing, insignificant bugs are included, or irrelevant bugs*  *Significant factors missing from the synthesis*  *Significant recommendations missing* |  |
| **Create and informative and useful presentation for the project manager** | *Key information is presented*  *Handouts, visuals, demonstrations, etc. support and complement the presentation*  *Report order is clear from the presentation* | **Speaking** | *Succinctly presents key information*  *Uses concise, accurate, and useful support materials to support and complement the presentation*  *Orders presentation to support the order and understanding of the written report* |  | *Omits or inaccurately presents key information*  *Uses verbose, inaccurate, or extraneous support materials that detract from or confuse the presentation*  *Order does not relate to the order of the written report or does not support report understanding* |  |
| **Demonstrate trustworthy technical expertise and communication skills** | *Focused and organized presentation*  *Carefully planned and well-executed presentation*  *Each team member’s role is clearly defined*  *Each team member is properly attired for the meeting*  *Questions are accurately, authoritatively, and respectfully answered* | **Speaking and Teaming** | *Demonstrates a clear understanding how to organize a presentation useful to the project manager*  *Demonstrates careful planning, avoids first-time problems, and anticipates potential problems*  *Demonstrates a clearly defined role for each team member*  *Attire for each team member is appropriate for the meeting*  *Demonstrates a clear and accurate understanding of questions, and accurately and respectfully answers each* |  | *Lacks focus or is disorganized; not useful for the project manager*  *Demonstrations lack of preparation and inadequate planning*  *Team member roles are unclear*  *Team members under dress or over dress for the meeting*  *Demonstrates lack of understanding or the lack of ability to explain answers to questions. Lack of respect for the questioner* |  |
| **Collaborate effectively on a software development team** | ***Breakdown the software development project into small, independent task***  ***Effectively and equitable assign tasks to individuals or small groups of developers that can be completed in the allotted time***  ***Effectively coordinate task among individuals or small groups***  ***Effectively and efficiently coordinate results from each task*** | **Teaming** | ***Each task is independent, clearly defined, and contributes to the overall software development task***  ***Each team is assigned tasks that can be accomplished in the allotted time and tasks are evenly assigned***  ***Each individual or small group is aware of the state of tasks assigned to other individuals or small groups***  ***Results of each tasks are collected in a uniform, easy to use document*** |  | ***Tasks are not independent, are vague or unclear, or do not contribute to the software development task***  ***Some team assigned tasks that take too little or too much time, and teams are assigned tasks that fall short of or exceed the allotted time***  ***Individuals and small groups are unaware of the state of other individual or small group task***  ***Results of each task are not clear or are not easy to access*** |  |
| **Organize and execute a meeting with the project manager and the software development team** | ***Required attendees are notified of the meeting arrangement***  ***Required attendees are present on time***  ***Meeting is well-organized and executed*** | **Teaming** | ***Meeting announcement is sent with date, time, and place in advance***  ***All required attendees present on time***  ***All major topics are presented, no time is wasted, all questions are answered in the allotted time*** |  | ***No meeting announcement, missing information, or inadequate advanced notice***  ***One or more required attendees absent or late***  ***Omitted major topics, time not on task, not enough time to answer all questions*** |  |
| **Develop knowledge of individual team member skills and trust among team members** | ***Identify skills of each team member***  ***Develop trust among team members*** | **Teaming** | ***Team members are able to clearly state at least two strengths and weaknesses for each team member***  ***Team members complete assigned tasks and wait for others to complete assigned tasks*** |  | ***Team members cannot identify team member strengths or weaknesses***  ***Team members do not complete assigned tasks or do tasks assigned to others*** |  |