BURGER BREAKOUT

CONFIGURATION MANAGEMENT PLAN

Version Number: 1.0

Version Date: 04/17/2020

VERSION HISTORY

Version Number	Implemented By	Revision Date	Approved By	Approval Date	Description of Change
1.0	Michael Taylor	04/17/2020	Michael Taylor	04/17/2020	Initial Creation

TABLE OF CONTENTS

1 INTRODUCTION

1.1 PURPOSE OF THE CONFIGURATION MANAGEMENT PLAN

The purpose of this Configuration Management Plan (CMP) document is to specify how Burger Breakout will document and inform stakeholders of the Configuration Management (CM) for Burger Breakout. The CMP will outline what CM tools will be used, as well as how each CM tool will support Burger Breakout.

1.2 SCOPE

The CMP will detail the Configuration Items (CI) describing identification, modifications, releases, reports, consistency, correctness, as well as the storage of said CI.

1.3 LIFE CYCLE

The life cycle of Burger Breakout operates under the specifications defined by The University of Maine at Orono's COS420 syllabus under the instruction of Professor Sepideh Ghanavati. Burger Breakout began in late January of 2020 and will be guaranteed to operate through May 1st, 2020. Any development beyond May 1st, 2020 will be at the independent discretion of Team Six Guys.

1.4 LIMITATIONS

The limitations of the CMP for Burger Breakout rely heavily on the development time of Team Six Guys. Team Six Guys consists of six undergraduate students studying Computer Science at The University of Maine at Orono, and development time may fluctuate based on course load. The secondary limitation of the CMP for Burger Breakout is the recent Covid-19 Pandemic. The situations regarding Covid-19 are changing rapidly posing an unpredictable factor for further development of Burger Breakout.

1.5 INTENDED AUDIENCE

The indented audience for this CMP includes the Project Owner, Scrum Master, Development Team, as well as Professor Sepideh Ghanavati and Sanonda Gupta.

1.6 KEY TERMS AND REFERENCES

Term	Definition
CMP	Configuration Management Plan
CI	Configuration Item
CM	Configuration Management

2 CONFIGURATION MANAGEMENT

2.1 APPROACH

The development of Burger Breakout follows the CM guidelines of the Agile Methodology using GitHub and ZenHub through a series of Sprints.

2.2 ORGANIZATION

The development of Burger Breakout is broken down into Sprints, a two-week interval of time for development. Prior to a Sprint beginning Team Six Guys meets to determine which Sprint items will be worked on, and who will work on each item for the up coming sprint. The meeting is overseen by the Product Owner as well as the Scrum Master.

2.3 RESPONSIBILITY

The CM approach dictates each Sprint Cycle has a rotating responsibility schedule for Team Six Guys. Moving in a sequential order of the following randomized list of names set in the beginning of the first Sprint: David, Michael, Cooper, Kevin, Mike, and Ethan rotate through serving as Product Owner, Scrum Master, and Developer. The responsibilities of each title are as follows:

Product Owner – This role manages the overall product by keeping the product backlog up to date, ensures tasks are being completed accurately, as well as making sure tasks are being done in a reasonable amount of time.

Scrum Master – Primarily oversees development team in following the Scrum as well as the Agile Methodologies. The scrum master also works to ensure the team works together with the product owner.

Developer – A developer works on items assigned during preliminary Sprint meetings and communicates with the rest of the team the status of their work.

3 CONFIGURATION MANAGEMENT ACTIVITIES

3.1 CONFIGURATION IDENTIFICATION

3.1.1 Identify Configuration Items

Burger Breakout uses several types of Configuration Items (CI) such as services, software, devices, documents, and staff.

3.1.2 Name Configuration Items

CI's for services Burger Breakout uses are GitHub, ZenHub, Discord, and Blackboard.

For software, Burger Breakout utilizes the Unity3d Engine for game development as well as Microsoft Word for documentation.

CI documents include this CMP, the Software Requirements Specification, the Team Member Report document, Sprint Backlog, Product Backlog, Domain Model, User Story, Use Case Diagram, Sequence Diagram, Software Architecture, and the Sprint Review Report.

Developers, the Scrum Master, and the Product Owner are CI's the staff of Team Six Guys makes up.

3.1.3 Acquiring Configuration Items

GitHub contains a repository of all files for Burger Breakout. To get setup with the repository, navigate to https://github.com/Ethan-Esber/Project-Burger.

ZenHub is an addon for GitHub, Team Six Guys uses ZenHub to organize the workflow of Burger Breakout. To setup ZenHub, navigate to https://www.zenhub.com/signup and select the browser extension option to install ZenHub. It may be required to create an account with ZenHub, do so if prompted. Once the ZenHub browser extension is installed, navigate to https://github.com/Ethan-Esber/Project-Burger#workspaces/dirty-5e3c89e63da63994e42ed96a/board?repos=237125737 to view the board.

Team Six Guys utilizes Discord to communicate amongst one another. To use Discord, navigate to https://discordapp.com/download. After downloading and installing Discord, create an account. To join the Burger Breakout Discord chat, email any of the members of Team Six Guys your username and number, found in the lower left-hand screen of Discord.

Blackboard is used for submitting project deliverables, finding project guidelines, as well as locating software development information in lecture slides. Blackboard also acts as a forum for class wide discussions regarding software development. Blackboard can be found https://bb.courses.maine.edu/. One must be registered for COS420 Spring 2020 to view the Blackboard specific to Team Six Guys' class.

Unity3d is used as the game engine for Burger Breakout. To get started with Unity3d, navigate to https://store.unity.com/#plans-individual and sign up for a free license. After receiving a license for Unity3d, download and install Unity 2018.4.16f1. Download the GitHub repository explained above, launch Unity, and select the GitHub repository as the game project.

Microsoft Word is used to create and edit Word Documents for Burger Breakout's documentation. Microsoft Word is provided by the University. For the latest installation instructions, refer to https://umaine.edu/it/microsoft-office365/.

The CI documents can be found inside the GitHub repository under the Documents folder.

3.2 CONFIGURATION CONTROL

3.2.1 Requesting Changes

Requests for changes to Burger Breakout can be made by submitting an issue at https://github.com/Ethan-Esber/Project-Burger/issues

3.2.2 Evaluating Changes

Changes will be evaluated in a meeting amount Team Six Guys prior to the start of a new Sprint. During this meeting, new changes, starting with the oldest change request will be evaluated. The evaluation will consist of discussing the request, so all team members fully understand the idea, followed by assigning a point value based on the preliminary thoughts of difficulty.

3.2.3 Approving or Disapproving Changes

After evaluating each new change request, Team Six Guys will circle back to the first request and discuss the change. The discussion will include whom does the change affect, how big of a change will this request be to Burger Breakout, how will the change affect the scope of Burger Breakout, and who has the knowledge base to tackle said change. After discussing, Team Six Guys will vote on whether to approve, or disapprove of the change request. If a request is denied, the Product Owner will add a comment to the issue on GitHub summarizing the reasons for denying the change request. The issue will then be closed. Should a change be approved, a comment will be added to the issue on GitHub stating as such.

3.2.4 Implementing Changes

Once a change request has been approved, Team Six Guys will wrap up the Sprint Planning meeting by assigning the changes to team members. Changes will be assigned based on knowledge level, interest level, and team members development time for the Sprint. Once a change has been assigned to a team member, the team member will work on this change throughout the sprint with the expectation of completing the task. Should a task not be completed during the sprint, Team Six Guys will review the task during the next sprint planning meeting. Once a task is complete, the issue on GitHub will be closed and the next release of the game will contain the requested changes.

3.3 CONFIGURATION STATUS

3.3.1 Metrics

Metrics and reports for Burger Breakout can be found on ZenHub and GitHub, respectively.

3.3.2 Storage and Access Control of Status Data

All data regarding Burger Breakout is freely available on GitHub and ZenHub, apart from personally identifiable information requested not to be used in the transcript of the focus group participants.

3.4 CONFIGURATION EVALUTATION AND REVIEWS

3.4.1 Audit

Prior to a release, an audit of all CI's will be performed by the Product Owner to ensure all CI's are accurate in respect to the CMP.

3.4.2 Procedure

An audit will begin by first reviewing the CMP. Once the auditor has refreshed themselves of the CMP, they will then begin to go through all CI's, starting with any new ones, and ensuring they follow the expectations set forth by the CMP. If a CI is found to no longer, or not follow the expectations set forth by the CMP, they shall either remove the CI, modify the CI to fit the expectations of the CMP, or modify the CMP to allow for the CI to meet the expectations.

3.4.3 Schedule

The audit schedule will run once per Sprint, happening at the end of each Sprint prior to release.

3.5 INTERFACE CONTROL

The coordination of changes to CI's with regards to items outside the scope of the CMP will be handled internally on a case by case basis by Team Six Guys.

3.6 SUBCONTRACTOR / VENDOR CONTROL

Burger Breakout is built on top of the Unity3d platform. Should a modification to Unity occur that negatively affects Burger Breakout, current development will pause while Team Six Guys works internally to modify Burger Breakout to fit such changes as the team sees fit. To combat any version changes of Unity, Burger Breakout will solely be built upon Unity 2018.4.16f.

3.7 RELEASE MANGAEMENT AND DELIVERY

3.7.1 Build

Burger Breakout is built at the end of each Sprint using the Unity3d Engine. Upon a successful build, an executable file is created. Once a build is created, Team Six Guys plays through the game to ensure a) the work done for the sprint is verifiably included in the build, and b) to ensure no work done negatively impacts other portions of Burger Breakout.

3.7.2 Release and Delivery

At the end of each Sprint, a new build of Burger Breakout is released to the GitHub repository. A release is delivered on a schedule outlined by the COS420 syllabus. These deliveries are sent to Blackboard via the project submission portal.

4 CONFIGURATION SCHEDULE

4.1 ACTIVITY RELATIONS

Prior to the start of a Sprint, a Sprint Meeting will take place in which a series of items will be discussed. First, incomplete work from last sprint will be reviewed. Problems arisen will be discussed as well as if the work should move forward, if the work should be dropped, or if another team member shall take over the issue.

Second, change requests will be reviewed. Upon approval, these requests will be added to the product backlog.

Third, user stories from the product backlog will be discussed. If the team decides this would be a good sprint to implement the user story, the story will be added to the sprint backlog.

Fourth, any new ideas a team member may have will be discussed.

Finally, stories will be assigned to team members based on the criteria outlined by Section 3.2.4.

Once a Sprint has begun, the Scrum Master shall review the CMP described in Section 6.1.

At the end of a Sprint, an audit will occur. The audit is outlined by Section 3.4.1. After the audit, a build will be created as stated in Section 3.7.1. Once the build is complete, a release to GitHub will be performed. More details can be found in Section 3.7.2. Should a release fall on a deliverable, a deliverable will be sent to Blackboard as stated in Section 3.7.2.

4.2 SCHEDULE

The following is a schedule for the releases and deliverables of Burger Breakout.

Date	Activity
02/04/2020	Deliverable 0
02/25/2020	Deliverable 1 Release
03/06/2020	Release
03/13/2020	Release
03/15/2020	Deliverable 2
03/20/2020	Release
03/27/2020	Release
04/3/2020	Release
04/17/2020	Deliverable 3 Release
05/01/2020	Release

5 CONFIGURATION RESOURCES

5.1 INFRASTRUCTURE

Burger Breakout is developed on the Windows 10 operating system and is development on top of the Unity3d Game Engine. Team Six Guys uses Git for version control, Discord for daily messaging, as well as Microsoft Word for documentation.

5.2 EQUIPMENT

Team Six Guys use a combination of computer desktops, laptops, mobile phones, and the equipment provided in the cloud by GitHub, ZenHub, Blackboard, and Discord to develop Burger Breakout.

5.3 TRAINING

To develop Burger Breakout, it is recommended to learn how to use the Unity game engine, Git, ZenHub, and the agile process.

6 CONFIGURATION MAINTENANCE

6.1 PLAN MONITORING

The CMP will be monitored by the Scrum Master; however, all team members shall review the CMP each Sprint to ensure their work follows the expectations set forth by this document.

6.2 PLAN UPDATE FREQUENCY

The plan shall be updated on an as needed basis. The CMP will be reviewed by at least two people, the Product Owner during the audit, as well as the Scrum Master during the plan monitoring. Should either find a discrepancy or an item requiring an update, the CMP will be updated as such.

6.3 EVALUATION AND APPROVAL

Changes to the plan will be evaluated by the Product Owner and Scrum Master. The changes will be made known to the development team, and any team member may approve the changes.

6.4 PLAN COMMUNICATION

Any changes to the plan will be communicated by the team member performing said change, to the team via the Discord group.

6.5 HISTORY

The history of this document may be found at the GitHub repository for Burger Breakout, as well as on page two of this document.