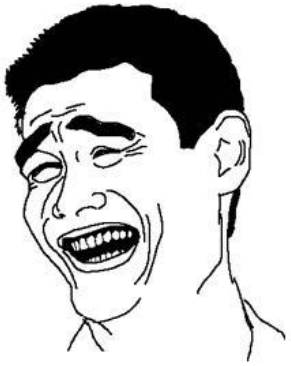


PAC MEME

Natalie Boardway, Jon Griesen, Nicholas Reitz and Nate Stern

Group Members

Natalie Boardway: Assistant to the Regional Project Manager

Jon Griesen: Project Manager (timeline overseer / sprite integration)

Nate Stern: Makes (all of the) diagrams -- usually overdone. Also superb note-taker

Nicholas Reitz: Software Engineer - Coding Extraordinaire

Introduction

Basics of Pac-Man

- Moving around the maze-- trying not to run into walls
- Trying to collect all the dots -- collect as many points as possible
- Avoiding the ghosts -- trying not to die

With a Twist

- Updating the graphics

Timeline (Implementation Approach)

- Phase One - Requirements Gathering
  - Scope Determination
  - Game Tutorials
  - Software Needs (Java / Other)
- Phase Two - Implementation
  - Initial GUI
  - Actor/Object Creation
  - Collision Mechanics (Map Pathing)
  - Attack Mode
- Phase Three - Refinement
  - Main Menu
  - Title Screen
  - Leaderboard
  - Visual Sprites/Audio Effects
  - Additional Levels/Difficulty Settings

Gantt Chart (High Level)

Pac-Meme

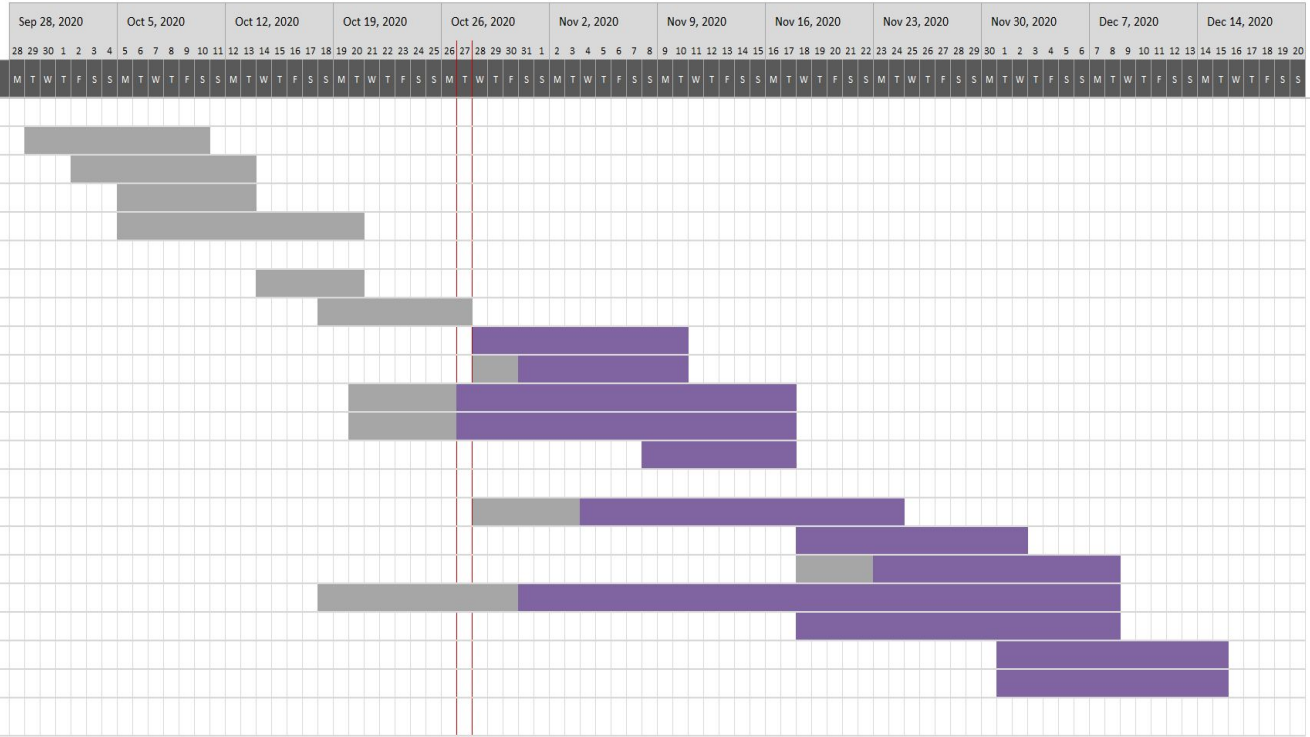
Moot Floating Point

Natalie Boardway
Nicholas Reitz
Nathan Stern
Jon Griesen

Project Start: Tue, 9/29/2020

Display Week: 1

TASK	ASSIGNED TO	PROGRESS	START	END
Phase One - Requirements Gathering				
Scope Determination	Team	100%	9/29/20	10/10/20
Review Game Tutorials	Team	100%	10/2/20	10/13/20
Java Software Needs	Team	100%	10/5/20	10/13/20
Other Software Needs	Team	100%	10/5/20	10/20/20
Phase Two - Implementation				
Initial GUI (Graphics 2D JPanel)	Team	100%	10/14/20	10/20/20
Player Actor Creation	Reitz	100%	10/18/20	10/27/20
Enemy Actor Creation	Boardway	0%	10/28/20	11/10/20
Collectable Object Creation (Dots, Fruit)	Griesen	25%	10/28/20	11/10/20
Collision Mechanics (Map Pathing)	Stern	25%	10/20/20	11/17/20
Collision Mechanics (Actors & Objects)	Stern/Reitz	25%	10/20/20	11/17/20
Attack Mode Mechanics	Reitz	0%	11/8/20	11/17/20
Phase Three - Refinement				
Main Menu	Reitz	25%	10/28/20	11/24/20
Title Screen	Boardway/Stern	0%	11/18/20	12/2/20
Leaderboard (High Scores)	Boardway/Stern	25%	11/18/20	12/8/20
Sprite Integration (Animation)	Griesen/Reitz	25%	10/18/20	12/8/20
Audio Integration (Sound Effects)	Griesen/Reitz	0%	11/18/20	12/8/20
Difficulty Settings	Team	0%	12/1/20	12/15/20
Additional Levels	Team	0%	12/1/20	12/15/20



*SIMPLE GANTT CHART by Vertex42.com (https://www.vertex42.com/ExcelTemplates/simple-gantt-chart.html?utm_source=ms&utm_medium=file&utm_campaign=office&utm_content=text)

Gantt Chart (Remaining)

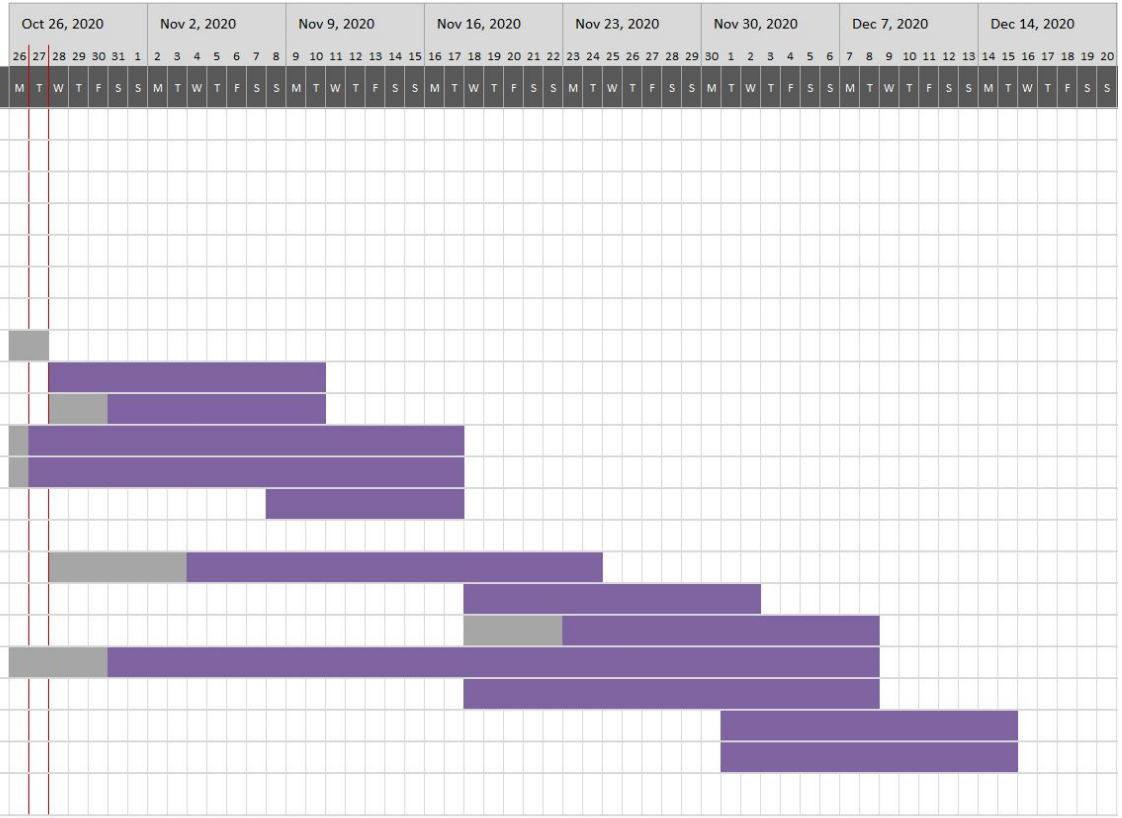
Pac-Meme

Moot Floating Point

Natalie Boardway
Nicholas Reitz
Nathan Stern
Jon Griesen

Project Start: Tue, 9/29/2020

Display Week: 5



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Review Game Tutorials	Team	100%	10/2/20	10/13/20
Java Software Needs	Team	100%	10/5/20	10/13/20
Other Software Needs	Team	100%	10/5/20	10/20/20
Phase Two - Implementation				
Initial GUI (Graphics 2D JPanel)	Team	100%	10/14/20	10/20/20
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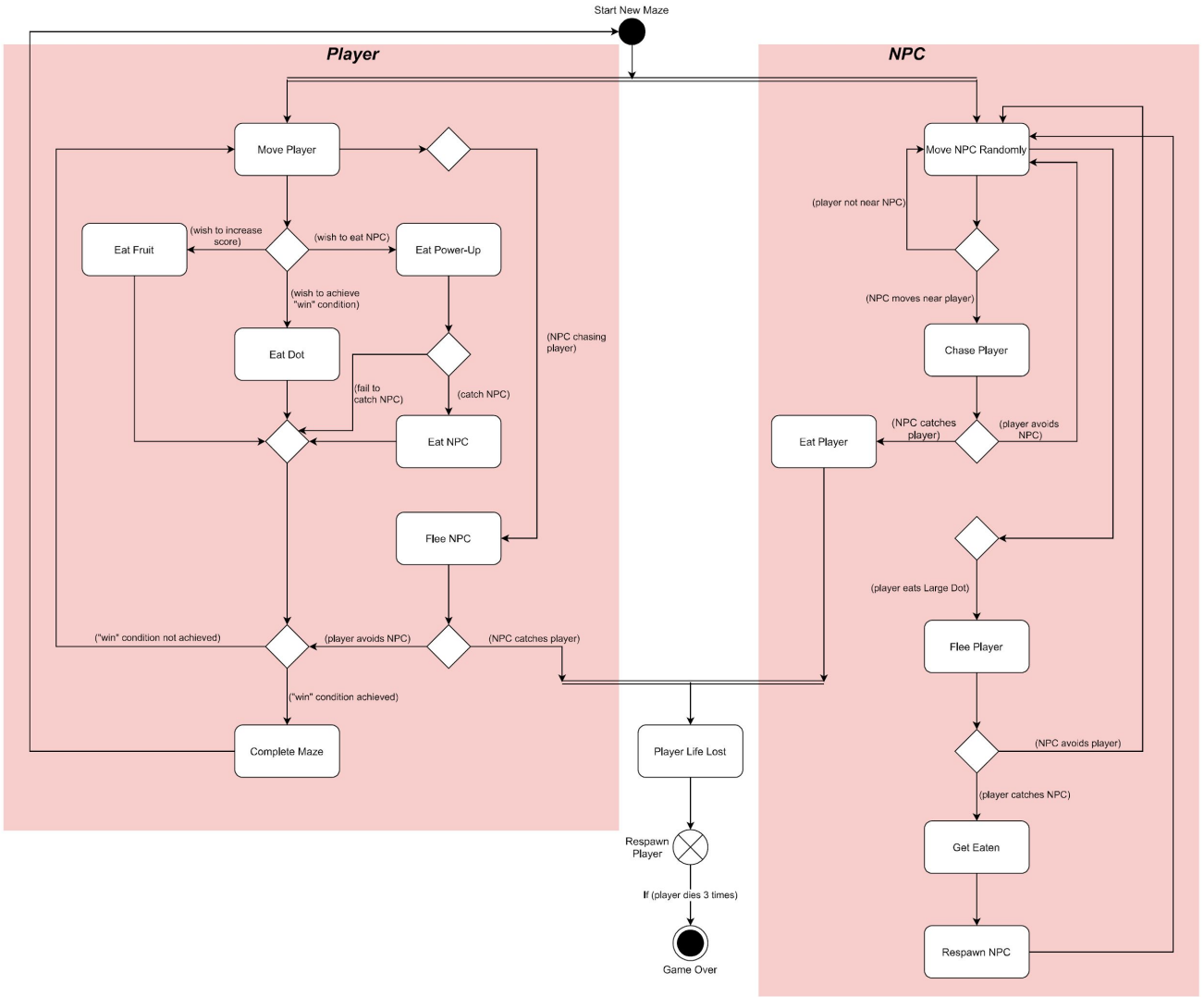
Phase Three - Refinement				
Main Menu	Reitz	25%	10/28/20	11/24/20
Title Screen	Boardway/Stern	0%	11/18/20	12/2/20
Leaderboard (High Scores)	Boardway/Stern	25%	11/18/20	12/8/20
Sprite Integration (Animation)	Griesen/Reitz	25%	10/18/20	12/8/20
Audio Integration (Sound Effects)	Griesen/Reitz	0%	11/18/20	12/8/20
Difficulty Settings	Team	0%	12/1/20	12/15/20
Additional Levels	Team	0%	12/1/20	12/15/20

Activity Diagram



Use Case Description

Use Case Name: Consume Collectable	ID: 1	Importance Level: High
Primary Actor: Player	Use Case Type: Overview, Essential	

Stakeholders and Interests:
Player – Wants to accumulate points and complete game objective through in game object consumption.

Brief Description: This use case describes how the game system is modified when the player character interacts with a consumable object within the game context.

Trigger: Player character interacts with a consumable object, resulting in one or more game system state changes.
Type: External

Relationships:
- Association: Player, GamePanel
- Include: n/a
- Extend: CollectDot; CollectFruit; ConsumeNPC; UsePowerUp
- Generalization: n/a

Normal Flow of Events:
1. The player actor navigates the game map.
2. The player actor consumes one of several possible collectable game objects.
3. Depending on the type of collectable object consumed, the game state is modified appropriately.
   - If dot is consumed, subflow S-1 is performed
   - If fruit is consumed, subflow S-1 is performed
   - If NPC is consumed, subflow S-1 is performed
   - If power up is consumed, subflows S-1 & S-2 are performed
4. Consumable object despawns from the game space (or returns to central hub in case of NPC).

SubFlows:
- S-1: In game player score increases (point value increase dependent on consumable object type)
- S-2: Player actor “attack mode” enacted. Enemies transition to flee behavior and become vulnerable.

Alternate/Exceptional Flows:
n/a

Demo time!