CS426 Game project proposal

Team name: The Raging Pygmy Goats

Team members: Alex Hackman and Peter Schatz

Game name: Snowball!

Proposed work:

- Provide an overview of your game (give a short description about the game, i.e., game plot, objective, etc.):

  We our turning our prototype from 425 into a full tower defense game. The map will be a mountain, with a house on the top and a variety of obstacles. Snowmen will spawn at the base of the mountain, and attempt to reach the peak. Each time a snowmen reaches your house, it will throw itself on it as a layer of snow. Once the house is fully engulfed, you lose.

  Play will take place in two phases. During the 'build' phase, you can construct towers and purchase upgrades. The second phase is the 'play' phase, when the snowmen wave spawns. While the snowmen are trying to get to your house at the top, you will be able to launch snowballs down the mountain to meet them. The towers you constructed will assist you as an automated line of defense. You will be rewarded some form of currency for each kill, and at the end of the wave you will enter the build phase again.

- What are the characters and their resources (e.g., health points, number of characters, weapons, etc.) in the game? What are the behaviors of the characters and how do they interact with each other and their resources?

  Your character is living in the house on the top of the mountain. You have a health bar indicating the snow coverage of the house, and a meter indicating whether or not you have a snowball ready. Health, snowball recharge time or stockpile, and some stats regarding the effectiveness of snowballs will be available for upgrade.

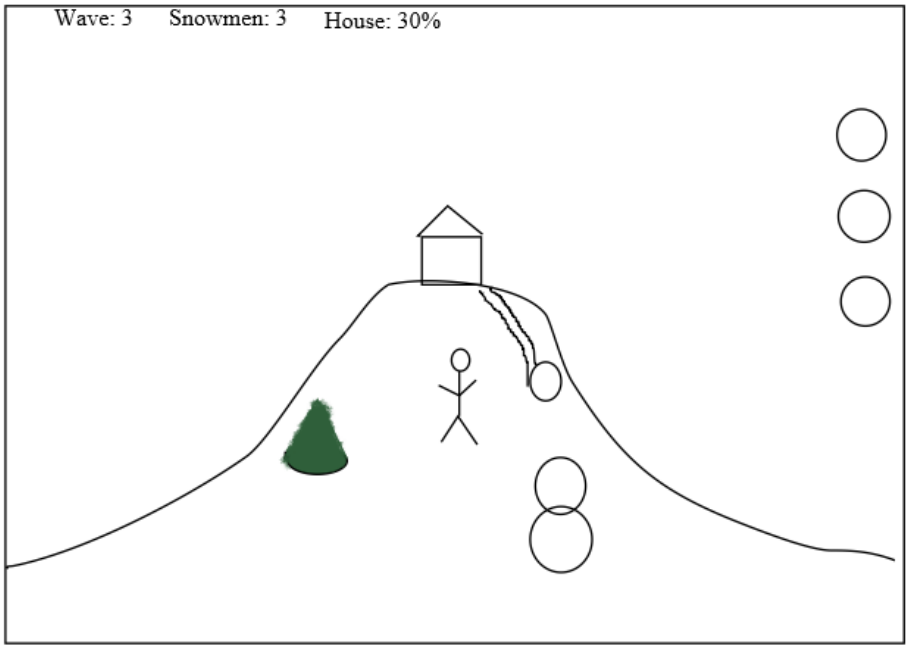
'Towers' will have a variety of stats: damage, rate of fire, range, target area, and a possible additional effect. All of these will be upgradable.

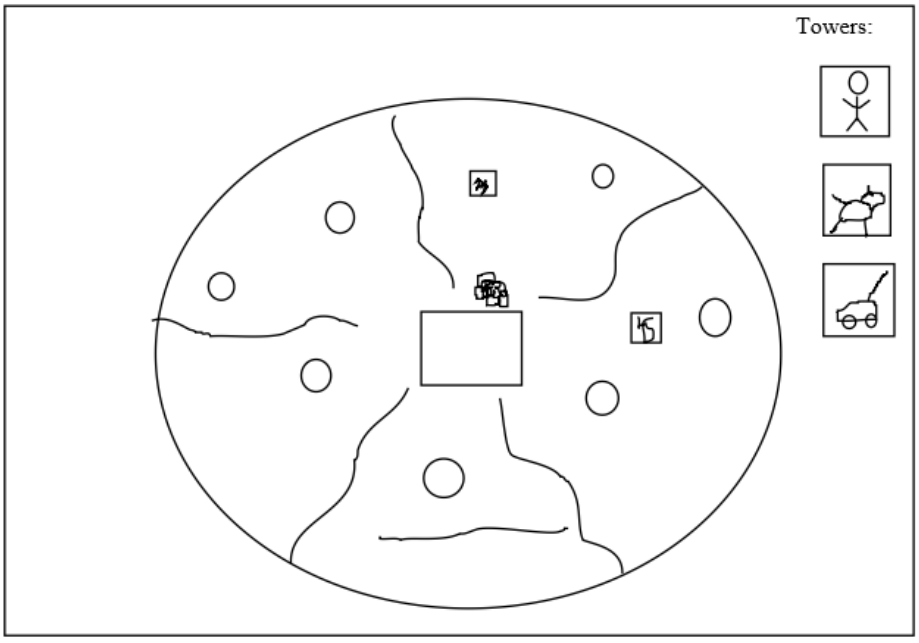
There will be different types of snowmen as well, each with its own health and speed. Other possible stats include resistances/immunities, terrain cost modifiers, and creation/destruction effects.

- What types of conflicts do you have in the game?

Snowmen are the enemies. They are attempting to bury your house under a layer of snow. The player engages them directly by launching snowballs down the mountain, and indirectly by building towers to fight the invading army.

- Provide sketches/drawings to show how your game will be played. (Attach to this page)





- What is the main language you will use to implement the game?

We will use Javascript/HTML 5 to create the game, since we already have a working prototype, and it makes it extremely simple to share the game with others. We may also work to port it to Android, if we have time.

- What tools/libraries you will use?

We will mostly use Three.js for the graphics and at least some of the math. We are unsure yet what other tools we will need, but will probably use tools like Maya and Audacity for creating art and sound assets.

- What types of user interface will you provide/use?

We will try to make it entirely mouse/touch controlled. There will be a HUD to display pertinent information, with towers and other actions available to click on or drag to the field of play. The idea is to make this a simple to use web game that can easily translate into a mobile game.

- What are the milestones you plan to have? Please give a short description and an expected finish time each for milestone.

Finish designing software, creating stubs and have the code pretty much fully outlined by Feb. 13.

Have mouse controls, level creator, enemy and tower AI implemented by March 13

Interface finished and at least draft art resources finished by March 21.

Feature list finalized, and full featured working level done by April 4 (start alpha testing)

All features implemented by April 18 (start beta testing)

All art, music, and sound assets finalized by April 25th. Have opening and ending credits, any videos, and tutorial material, etc. finished. Final testing and polishing until final release/presentation.

- What are the difficulties/challenges do you foresee? How do you plan to address them?

  We expect to run into plenty of difficulties implementing the AI, and for bugs to pop up randomly. We have front loaded the main coding in the semester so we try to have it done before other classes start giving heavy workloads that may interfere with this work. This also allows us to have plenty of time for testing and polishing the final product.

- How would you divide the tasks among your team members (if more than one)?

  Peter Schatz will be Project Manager and Technical Lead, focused on the software design and time/project management. He will be in charge of splitting up the work fairly and efficiently, as well as the design and testing of the software. He will probably focus on programming the controls and UI.

  Alex Hackman will be Creative Designer/Lead, focused on the creative aspects of the project. He will be in charge of the game design and art/sound assets. He will probably focus on programming the AI and level creation.

  We will obviously help each other on anything we may get stuck with, and all assignments are subject to change.

- Why do you think your game is interesting/exciting?

  This game is interesting because of our unique take on a well-established genre. We have many features common to tower defense games: tower upgrades, random spawns, and an economy. Unique to our game is the theme: you are a kid defending your house from snowmen. The 'towers' you build are really your friends that you hire to protect the house using shovels, blowdryers, etc. It is a silly, casual theme that should leave lots of room for jokes. Another key feature is that you don't just watch the snowmen attack. You actively contribute to your defense by launching snowballs at the invaders.

- Do you model your game after an existing game? If so, what is it?

Our game shares similarities with many other tower defense games, but the only game we knowingly drew inspiration from was our 425 prototype.