# Implementation plan for TwitterNethack Assignment in the course PA1415 Programvarudesign <2017-04-11> Author: Morgan Lexander, Henrik Nilsson, Magnus Nyqvist och Victor Olsson.

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## **System description**

The system is going to be based around the classic game NetHack but in 2D graphics. NetHack is a sort of adventure and roleplaying game where you create a character and goes through random generated dungeons. In the dungeons you can meet various different monsters and collect items. The final goal is to find the amulet of Yendor and escape with it alive.

Nethack is a very advanced game and because of this and the limited time we are given, our version of NetHack is not going to include all of the features that the original have. The functionalities we are aiming to implement:

- An opening screen where you can start a new game or join an existing one.
- A screen where you can setup the character.
- Monsters and creatures that freely move around the dungeons.
- Different items to pick up and drop.
- Multiplayer support.
- Generate dungeons with help of twitter.

The dungeons in our NetHack version is going to be generated by the Twitter API. Its job is to read certain keywords in Twitter posts and use these to create specific types of monsters and items for every room in the game. When you enter a new cave, your system shall briefly display information about the "owner" of the cave.

### **Prioritised List of Use Cases**

#### **Motivation for Priorities:**

The reason to why we chose to order the use cases like this is because we found this order necessary to create a functional and entertaining game as quick as possible. Another reason to this specific setup is that we think it would be the most efficient way to achieve the minimum viable product.

#### Use cases:

1. **Use Case:** Generate Room with Twitter

**Story points: 25** 

Conditions of satisfaction: Solid objects and floors generated and placed by the

Twitter API.

2. Use Case: Select a Twitter feed

**Story points:** 1

Conditions of satisfaction: The player can choose what Twitter feed that will be used

in the generation of the first cave.

3. Use Case: Start a singleplayer game / Start game

**Story points: 15** 

Conditions of satisfaction: Stats (HP and skills), collision and input for player.

4. **Use Case:** Spawn an Enemy

**Story points: 4** 

Conditions of satisfaction: Killable characters generated by the Twitter API.

5. Use Case: Enemy Attack Player

**Story points: 2** 

**Conditions of satisfaction:** Enemy can detect and hit the player.

6. Use Case: Attacks Enemy With Melee Weapon

**Story points: 2** 

**Conditions of satisfaction:** The player can attack enemies with a sword.

7. Use Case: Gain Experience Points

**Story point: 1** 

**Conditions of satisfaction:** The player gain points from slaying enemies.

8. Use Case: Opens Door

**Story point:** 1

Conditions of satisfaction: The player can open doors.

9. Use Case: Attacks Obstacle

**Story point: 2** 

**Conditions of satisfaction:** The player can attack obstacles.

10. Use Case: Destroy Obstacle

**Story points:** 1

**Conditions of satisfaction:** The obstacles can be destroyed and disappear.

11. Use Case: Open Inventory

**Story points: 2** 

Conditions of satisfaction: The player can open an inventory screen and interact with

it.

12. Use Case: Picks Up Money

**Story points:** 1

Conditions of satisfaction: The player can pick up money from the ground by

waking over it.

13. Use Case: Help Injured NPC

**Story points:** 1

Conditions of satisfaction: The player is able to heal an NPC.

14. Use Case: Accept a quest

**Story points:** 6

Conditions of satisfaction: the player can accept different quest from an NPC

15. Use Case: Step Into Trap

**Story points:** 1

Conditions of satisfaction: The player is walking on the ground and randomly steps onto a

trap, this will damage and stun the player

16. Use Case: Equip armor piece

**Story points: 4** 

Conditions of satisfaction: the player can equip armor using the inventory

17. Use Case: Player Uses Potion

**Story points: 2** 

Conditions of satisfaction: the player can drink potions to get a temporary bonus

18. Use Case: Ranged Attack

**Story points: 2** 

Conditions of satisfaction: the player can use ranged attacks

19. Use Case: Player Chooses Race

**Story points: 2** 

Conditions of satisfaction: the player can chose race when he created his character

20. Use Case: Display Server list

**Story points: 3** 

**Conditions of satisfaction:** the player can view a server list of all available servers

21. Use Case: Create player group

**Story points:** 7

Conditions of satisfaction: the player can create a group with other players that share

exp gain and item pickups.

22. Use Case: Attack other player with melee weapon

**Story points: 2** 

**Conditions of satisfaction:** the player is able to attack other players

23. Use Case: Killing another player

**Story points: 2** 

**Conditions of satisfaction:** The player is able to kill another player.

24. Use Case: Trading items

**Story points:** 7

Conditions of satisfaction: the player can trade with another player in a proper trade

window

25. Use Case: Choose gender

**Story points:** 1

**Conditions of satisfaction:** The player is able to choose a gender for the character at the

start of the game.

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## **Estimated Velocity Per Iteration**

Maximum story points per iteration: 55 Average story points per iteration: 50 Minimum story points per iteration: 45

## **Implementation Plan**

#### Iteration 1:

Total points: 49

- 1. Generate Room with Twitter
- 2. Select a Twitter feed
- 3. Start an Offline game / Start game
- 4. Spawn an Enemy
- 5. Enemy Attack Player
- 6. Attacks Enemy With Melee Weapon

#### Iteration 2:

Total points: 48

- 7. Gain Experience Points
- 8. Opens Door
- 9. Attacks Obstacle
- 10. Destroy Obstacle
- 11. Open Inventory
- 12. Picks Up Money
- 13. Help Injured NPC

- 14. Accept a quest
- 15. Step into trap
- 16. Equip armor piece
- 17. Player Uses Potion
- 18. Ranged Attack
- 19. Player Chooses Race
- 20. Display Server list
- 21. Create player group
- 22. Attack other player with melee weapon
- 23. Killing another player
- 24. Trading items
- 25. chooses gender