**Level 1: Play the Nethack Game**

**Outline**

Play the original Nethack game to establish a mind-set around basic computer game and programming concepts. Research the history of “rogue like” games. Decompose the Nethack game from perspective of input/output devices and processes.

**Objectives**

* Icebreaker activity to establish community and classroom norms.
* To realize that computers have evolved to take various forms in modern society.
* To begin thinking about computers as a collection of input/output devices and processes.

**Materials & Resources**

* Online Nethack: <https://alt.org/nethack/>

**Questions**

* Play the Nethack game until you have a character that has survived for more than one dungeon level.
* How many levels have you reached so far?  
  3
* What character type are you?  
    
  valkyrie
* How many times (deaths) did it take you to get this far?  
    
  2
* What are some of the monsters you have encountered and how are they represented?  
    
  since i played the newer version of the game it has been updated a lot compared to the old one in the old one everything was a letter/character but in the newer version of the game the monsters actually have sprits
* What are some of the special objects you have encountered and how are they represented?

some special objects that i have encountered are you can find puddles on the ground that rust/ruin your weapon and armor if you walk through them

* What are some of the commands that you use most often?

the commands that i often use the most are attack and pick up, i still havent learned how to pick up things properly and i sometimes use the kick command to kick down doors

* Compare the Nethack interface to modern computer games:
* Does the primitive character based display limit the game play (Explain)?  
    
  i would say yes and no, no because you can do a lot more in net hack than you can in other games it seems like everything is thought of but i also think its limiting because it takes away the wow factor which is a huge part of a game so after about 10-20 minutes it just feels like clicking random buttons without any real progress
* Does the primitive command based input and control limit the game play (Explain)?  
    
    
  i would say no because as i said before in this game you are able to do a lotof things that you are unable to do in other games
* Is the Nethack game less complex or more complex than modern computer games (Explain)?  
    
    
  i think the game is more complex because there is a lot of thought that went into the game such as something so small as walking over a puddle can rust all of your gear making you weaker
* Compare the Nethack gameplay level to modern computer games:
* Is the gameplay easier or harder than modern games (Explain)?  
    
    
  i would say its harder than most games but not all because there is a lot you can do in this game and 1 wrong move can be your death and with all the options you have its really easy to make the wrong move
* Nethack is an example of a “Turn Based” game. Would it be better of the monsters moved in real time (Explain)?  
  i would say its better as a turn based game because if the monsters moved in real time that would make the game harder than it already is because there are so many buttons that do different things and it would almost be impossible to do the correct move that you want to do everytime if the game was in real time
* Nethack is an example of a “single player” game. Would it be better if the game was played in a multi-player world (Explain)?

i would say a little bit of both because if it was multiplayer it would allow people that like playing with others to enjoy but there should be still the option to play alone for people who want a challenge and who like to play alone

**Level 2: Nethack History**

**Materials & Resources**

* Google: “Nethack History”
* Google: “Rogue Like Games”

**Questions**

* Research the history of Nethack, focusing on the following questions:
* Who created the game and when was it created?  
    
  Mike Stephenson created nethack on July 28 1987
* What previous games was it based on?  
    
  Rogue
* What computer hardware did it originally work on?  
    
  Windows Xp 32
* What computer language was it written in?  
    
  nethack was proggramed in C
* How has Rogue/Hack/Nethack evolved and changed since the 1980’s  
    
  the newest version the one i played instead of the monsters and items being represented as letters they are now sprits
* Research the topic of “Rogue Like” games, focusing on the following questions:
* What are the main features of these types of games?  
    
    
  they are meant to be hard and the main thing about them is if you die you restart the entire thing
* How is it related to original “first person shooter” games like Doom?  
    
  this is related to doom because you are killing monsters just like in doom just in this one its not shooting them rather you are using a sword/magic
* How is it related to early “role playing” games?   
    
    
    
  this is related to role playing games because in this you can make your own character with uniqe powers and so on just like in a roleplaying game

**Level 3: Inside Nethack**

**Materials & Resources**

* Source Code: <https://github.com/NetHack/NetHack>
* Nethack License: <https://www.nethack.org/common/license.html>

**Questions**

* Questions related to Nethack Source Code…
* Where is the source code located? Can anyone access this code?

it is located on their main website and anyone is allowed to access it

* What is the current version of Nethack?  
    
  3.6.1
* What language is used to code Nethack?  
    
  C
* How is the source code different from a program that you download and install?  
    
    
  the soruce code is different because it is not yet compiled into a usable binary
* Questions related to the Nethack License:
* What is the Nethack user license called and where is it located?  
    
  <https://www.nethack.org/common/license.html>
* Does the license allow anyone to copy the program? (Explain)  
    
  yes anyone is allowed to download and and distribute nethack copies for free
* Does the license allow anyone to modify the program? (Explain)  
    
  yes it allows everyone to modify the the program on the condidtion that you can not sell the copies of nethack but you can give them out for free, a loophole around this is you are allowed to have a transaction fee and sell waranty
* How is the Nethack license different from licenses from big companies such as Microsoft and Apple?   
    
  you cant really take and distribute everything for free from apple and microsoft but you can with nethack
* What might be some of the advantages of the Nethack license for creating better programs and better versions of Nethack?  
    
    
  an advatage might be that someone creates a really good and fun version of nethack and they can distribute it to anyone they want for free
* What might be some disadvantages of the Nethack license related to the quality of the Nethack program.

some disadvatages might be that it would be hard to tell which copy is which since there would be so many and this would also be an easy way to get viruses