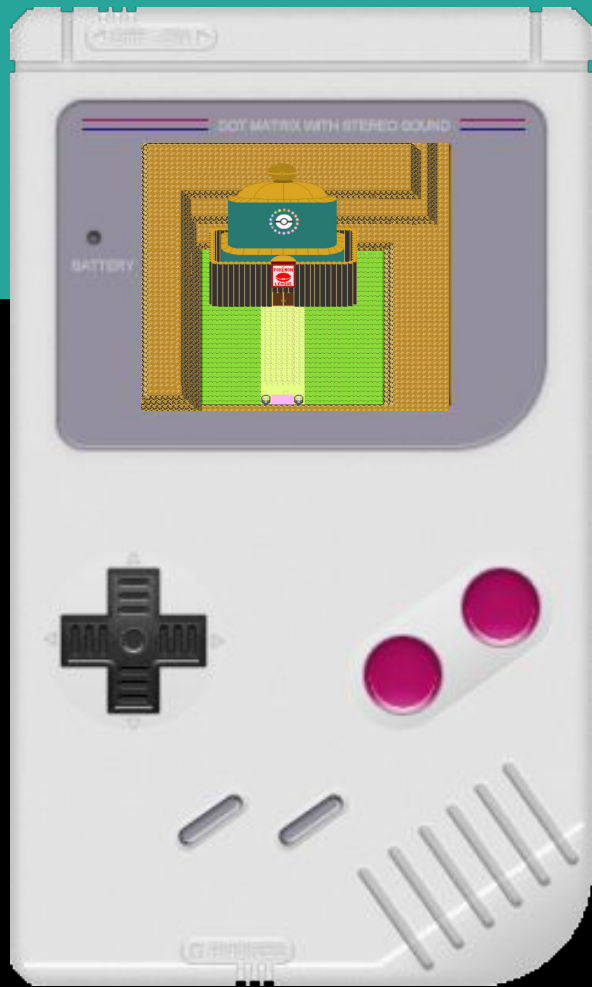# The Pokemon Project

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J. Patrick Lacher
John R. Adams
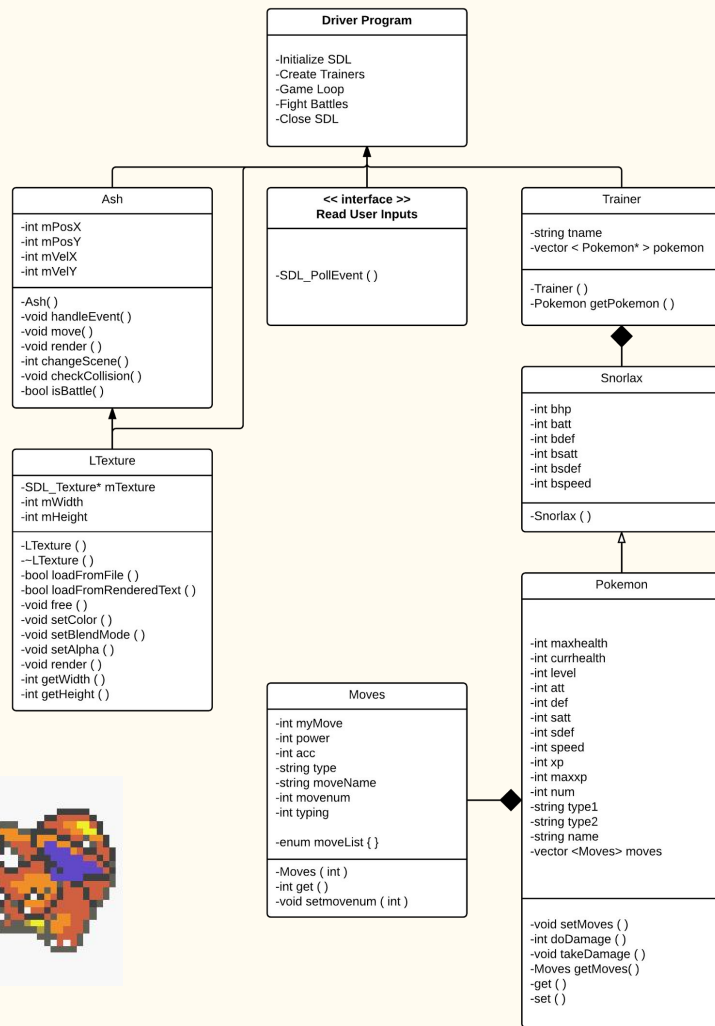Douglas Schmieder

Basic Project Description

- Our idea was to create a game following the idea of Pokemon, the classic monster-collecting JRPG adventure series for those who want to be the very best, like no one ever was.
- It would have been foolhardy to attempt to recreate in a few weeks with a three-man operation the entirety of Junichi Masuda's masterwork, so we scaled down our ambitions to create a game that functioned like Pokemon wherein the player could choose his team, defeat his rivals, and be crowned champion.
- We chose to work on this project because of a mutual love for Pokemon, which has been instilled in us since childhood and grows deeper with each new title, and a want to have our project be something we enjoy working on and will enjoy playing upon its completion.

Design Decisions

- Implemented with SDL
- LTexture used to wrap textures
  - backgrounds/sprites/etc.
- overworld.cpp program to drive game
- Players and NPC's have Trainer class
  - Contains vector of Pokemon pointers
- Each Pokemon inherits from pokemon.h
  - Pokemon class contains vector of Move objects
- Ash class controls player sprite

Driver Program

-Initialize SDL
-Create Trainers
-Game Loop
-Fight Battles
-Close SDL

Ash

-int mPosX
-int mPosY
-int mVelX
-int mVelY

-Ash( )
-void handleEvent( )
-void move( )
-void render ( )
-int changeScene( )
-void checkCollision( )
-bool isBattle( )

<< interface >>
Read User Inputs

-SDL_PollEvent ( )

Trainer

-string tname
-vector < Pokemon* > pokemon

-Trainer ( )
-Pokemon getPokemon ( )

LTexture

-SDL_Texture* mTexture
-int mWidth
-int mHeight

-LTexture ( )
--LTexture ( )
-bool loadFromFile ( )
-bool loadFromRenderedText ( )
-void free ( )
-void setColor ( )
-void setBlendMode ( )
-void setAlpha ( )
-void render ( )
-int getWidth ( )
-int getHeight ( )

Snorlax

-int bhp
-int batt
-int bdef
-int bsatt
-int bsdef
-int bspeed

-Snorlax ( )

Pokemon

-int maxhealth
-int currhealth
-int level
-int att
-int def
-int satt
-int sdef
-int speed
-int xp
-int maxxp
-int num
-string type1
-string type2
-string name
-vector <Moves> moves

-void setMoves ( )
-int doDamage ( )
-void takeDamage ( )
-Moves getMoves( )
-get ( )
-set ( )

Moves

-int myMove
-int power
-int acc
-string type
-string moveName
-int movenum
-int typing

-enum moveList { }

-Moves (int)
-int get ( )
-void setmovenum (int)

The Power of OOP

- Inheritance was extremely useful in creating the different pokemon files
  - Created a Pokemon.h base class that was then used to create the actual pokemon
- Composition was also useful in making the Trainer Class
  - The Trainer class is comprised of a vector of pokemon to signify the team
- Github