PACMAN
CP411 EDITION

RIGHT CLICK TO START

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Introduction

My program is a clone of Pacman, made popular in the 1980's. Everything is programmed to reflect what was done in the original program, with minor changes put into place.

There are 5 build in maps for the program, but it can be altered for many more maps. Maps come in flavours of 16x16 and 32x32.

The way the design and implementation went will be discussed during the presentation.

Controls:

To get to the options menu, right click the screen.
The arrow keys are used to move pacman.

Menu options:

New game – start a new game
Load Custom Map- start a custom map
Difficulty – pick the speed of the ghosts, from the ghosts moving 1 for every 4 pacman moves to a 1:1 ratio
Number of Ghosts – Pick the number of ghosts allowed
Quit – Quit the program

Artificial Intellegience of Ghosts:

The ghosts were programmed exactly like they run in the original pacman game.

Red - Blinky: Oikake - "Akabei" (oikake-ru = to run down/to pursue/to chase down). Or of course the english "Shadow":

Input is Pac-Man's location. He doesn't consider which direction Pac-Man is going. He attempts to reduce the distance between himself and Pac-Man. He will turn in the direction that will immediately reduce whichever is GREATER of the horizontal distance or vertical distance between himself and Pac-Man. This usually has him tenaciously following Pac-Man, but will occasionally lead to a "stupid" choice.

Pink - Pinky: Machibuse (machibuse = performing an ambush). Or in english "speedy":

Input is four tiles in front of Pac-Man. Therefore direction Pac-Man is facing as well as actual location of Pac-Man determine Pinky's "target." Pinky attempts to home in on this target using the same logic as the Red ghost uses to home in on Pac-Man. This does indeed effectively "set up an ambush" if Pinky manages to get in front of you. At close range, the direction you face can mean life or death. If you're facing away from Pinky, he will chase you (his "target" is now in front of both you and him). If you face him or turn off to a side, he may turn away from you if that provides a shorter route to the target than running through you. Note that if the space four tiles in front of you is on the other side of a wall, he will go over there in preference to the side you are on.

Blue - Inky: Kimagure - "Aosuke" (kimagure = fickle/moody/uneven temper). Or in english "Bashful":

Inputs, are the square two tiles in front of Pac-Man, and the location of the Red ghost. To envision Inky's target, draw a line from the Red ghost to the spot 2 tiles in front of Pac-Man. Now extend that line twice as far in the same direction and draw an "x" where it winds up. Inky wants to reach that "x." The fact that Inky's AI has two inputs instead of one makes his behavior more complex. On a fast-moving playing field with Pac-Man and the red ghost constantly changing position, that "x" can be jumping all over the place and sometimes Inky's behavior seems completely random - but it's not. No wonder his alternate name on the Puck-Man rom is "Stylist"! His regular name, Kimagure ("Whimsy") is also appropriate. It makes sense that the closer the red ghost is to Pac-Man (technically, the closer he is to the spot two spaces in front of Pac-Man), the more predictable Inky's behavior appears.

Orange - Clyde: Otoboke - "Guzuta" (Otoboke = Pretending Ignorance). The nick "Guzuta" means someone who lags behind. Or of course "pokey" in english:

Has two modes, "near" (within 8 tiles of Pac-Man) and "far" (farther away than 8 tiles). In "far" mode, he heads toward Pac-Man using Blinky's logic. This gets him in the same general area of the maze, but then in "near" mode, he has a bizarre change of heart and decides to head for his corner of the maze (lower left island). Unless you happen to be in the lower left region, his about-face will soon take him into "far" mode again, and he will circle back toward your area. If you are in the lower left, he will circle his favorite island indefinitely. He will usually only "chase" you if you happen to be in the path between him and the lower left of the screen. Orange's "far" mode rarely leaves him doubled up on top of Red due to the fact that their home quadrants are on opposite sides of the map and "scatter" mode repeatedly separates them. Plus, red is usually close enough to you that orange will go into "near" mode if he gets close to red.

Points and Bonuses

-little treats are worth 100
-big treats allow you to kill ghosts and gain you 200 points
-cherries give you 500 points, and appear every 30 ticks

Files Included

Pacman.exe – main game
custom.exe – allows you to edit or create a custom map, saves to mapcus.txt