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Project: Imperfect Clone of "Asteroids" Video Game

Description: This project consist in making na imperfect clone of the game "Asteroids" (originally by Atari) on Minix.

This game consists of one player controling a small triangular spaceship and destroy the different asteroids that appear on screen by shooting at them.

The game ends when the spaceship crashes into an asteroid and the final score is based on the number of asteroids the player managed to destroy.

Devices that are going to be used:

Timer:

- **Role:** measure time intervals for moving objects around the screen.
- **Functionality used:** Timer interrupts.

Keyboard:

- **Role:** Control the movement of the ship around the screen.
- **Functionality used:** Keyboard Interrupts.

Mouse:

- **Role:** Determine where the ship will be "pointing to" and mouse button for shooting.

- **Functionality used:** mouse buttons and movement

Video Card:

- **Role:** Show all the game elements to the player, animation and collision detection.

- **Functionality used:** Graphics Mode.

Modules that are going to be implemented:

Control module: The function of this module is to interact with the player and make the connection between the players controls and the game. It sends sends the players instructions (i.e. key presses and mouse input) to the game.

Game Logic Module: Controls the "physics" and the game code, transforming the player input into "actions" in the game and the consequences of these actions.

Graphics module: This module shows the game screen to the players, sending the "game information" via the screen to the players at several frames per second (with animation and collision detection).

Timers module: This module manages the timers implementation and how it interacts with other modules.

Menu module: This module manages the Main Menu for the game.

Development Plan:

First Week: Implement the Graphics Module and make sure all the different elements appear correctly on screen.

Second Week: implement the animations and collision detection.

Third Week: Implement the user input (keyboard and mouse).

(Note: The game logic is implemented incrementally throughout the three weeks, parallel to all the other modules.)