Activate All Robots

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Contents

Change History

Version	Who	What	When
0.0.1	Orhan Küçükyılmaz (OK)	Initial Document	17.04.2014
0.0.2	Orhan Küçükyılmaz (OK)	Updated Image	08.07.2015
0.0.3	Orhan Küçükyılmaz (OK)	Added Project Goals	02.07.2017
0.0.4	Orhan Küçükyılmaz (OK)	Change Game Over	21.06.2018
0.0.5	Orhan Küçükyılmaz (OK)	First Jump Robot	08.07.2018
0.0.6	Orhan Küçükyılmaz (OK)	Active Robots	18.07.2018
0.0.7	Orhan Küçükyılmaz (OK)	Shoot Colide	06.08.2018
0.0.8	Orhan Küçükyılmaz (OK)	State updates hero variables	21.03.2021
0.0.9	Orhan Küçükyılmaz (OK)	High Jump Robot	21.03.2021
0.0.10	Orhan Küçükyılmaz (OK)	Shoots optimized	21.03.2021
0.0.11	Orhan Küçükyılmaz (OK)	Simple Robot class added	24.05.2021
0.0.12	Orhan Küçükyılmaz (OK)	Simple Projectile class added	24.05.2021
0.0.13	Orhan Küçükyılmaz (OK)	More Robot ideas added	18.04.2022
0.0.14	Orhan Küçükyılmaz (OK)	More Robot ideas added	14.06.2022
0.0.15	Orhan Küçükyılmaz (OK)	Projectile Directions and speed	17.06.2022

Introduction

a jump'n'shoot riddle game,
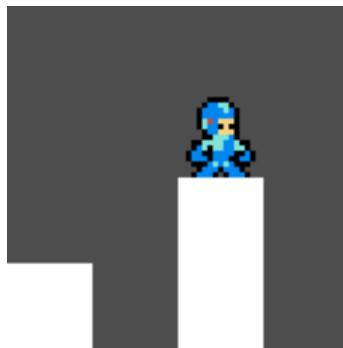
After the Hero's attack, it's your duty to…

> *activate all robots!*

Every `'activation-shoot'` reduces points. Every activated robot, machine or trap adds points. Getting hit removes points. If the player has only *one point left* he gets warned that only one *ONE* shoot is left …

> ~~… GAME OVER!~~

> *… AND ATFTER THAT, HE HAS NEGATIVE SCORE*

Figure 1: His name is mini

Levels, Robots, and more

In this Section it's all about the levels the robots and more.

Level 0 - The Start/Menu level

Most games don't have a playable menu screen level. What is a playable menu screen level, you ask? Good question, very good question indeed.

What is a menu screen?

Before a person can start a game he usually can selects on the menu screen what he wants to do. The menu screen usually cointains a list of selectable items:

- Start
- Options
- *(something something)*

On this menue screen the controls are usually different than the controls in the game.

Up and down on a joy-pad, joystick or on a keyboard (sometimes "w" for up and "s" for down) toggle between the menu items. With one button on the joy-pad, joystick or keyboard (sometime space or enter) the user select what he wants to do.

In this game the menu is a playable level. Why? So the user uses the actual controls of the game and not some extra controls for the menu. So he can learn the controls for the game early.

Level 0 teaches the player how to play the game, and presents him the first robot to activate.

But first let us take a look at the elements of the first level:

Figure 1: The Title

Project goals

No project is ever done if there are no goals set. To know when the Version 1.0.0 is done of this game, some goals are set.

Some of this gaols will be hard set goals, like the number of different levels, robots, boss robots and such. Some goals will be soft, like graphics, sound, all the look and feel.

Levels

A Minimum of 5 levels. Every Level has 5 Stages.

Level Zero is the playable menu level.

Level Structure

Each level exist of 5 stages. Each level has one theme and one kind of robot. 4 stages of one level introduce one new robot, the 5th stage is the Endgengner stage. Each level introduces a new kind of robot, each stage introduces a new version of the robot.

Robots

Start Level

Start Level (00)

- Start Robot

  - the Start Robot has to be activated
  - if activated it falls down

- Exit Robot

  - the exit robot appears if (all) the robots are activated
  - has to be activated also to leave the room

- Reset Robot

- can be activated if to many activation shoots where used to leave level 0-0
- resets the points to seven
- resets the start robot and the exit robot also.

- Continue Robot

  - appears if the level 1-0 to 1-4 are mastered
  - can be activated to continue the last played level

- Start Boss Robot

  - a hidden level? and a hidden boss?
  - sleeping tiger hidden dragon

Jump Level

Jump Level (01)

- Jump Robot

  ☒ starts jumping when activated
  ☒ helps get higher grounds
  ☒ blocks passages sometimes
  ☒ open passages by jumping away

Jump Level (02)

- High Jump Robot

  - like the jump robot
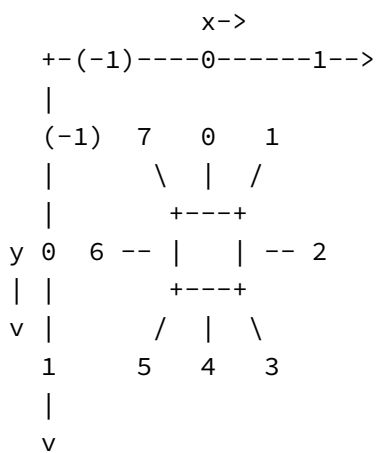 ☒ just jumps higher

Jump Level (03)

- Jump Shoot Robot

  ☒ jumps and shoots

What about directions?

> ☐ shoots to the left
> ☐ shoots to the right
> ☐ shoots to up
> ☐ shoots to down
> ☐ shoots diagonally left up
> ☐ shoots diagonally right up
> ☐ shoots diagonally left down
> ☐ shoots diagonally right down

That's eight directions.

Maybe an easier way to understand this is to use the following diagram:

```
           x->
   +-(-1)----0------1-->
   |
   (-1)   7   0   1
   |        \  |  /
   |         +---+
 y 0   6 -- |   | -- 2
 | |         +---+
 v |        /  |  \
   1       5   4   3
   |
   v
```

Number	direction	values
0	up	(x = 0, y = -1)
1	up-right	(x = 1, y = -1)
2	righ	(x = 1, y = 0)
3	down-right	(x = 1, y = 1)
4	down	(x = 0, y = 1)
5	down-left	(x = -1, y = 1)
6	left	(x = -1, y = 0)
7	up-left	(x = -1, y = -1)

An enum could be used to represent the directions.

but what if we wanted to add more directions?

Then math comes to the rescue:

$$x = r * cos(rad)$$

$$y = r * sin(rad)$$

where r is the radius and rad is the angle in radians.

If deg is the angle in degrees, then we can use the following formula:

$$x = r * cos(deg * \pi/180)$$

$$y = r * sin(deg * \pi/180)$$

Jump Level (04)

- Gravity Jump Robot

  ☐ jumps from the ground to the ceiling
  ☐ can sometimes be like an elevator

Jump Level (FINAL)

- Jump Boss Robot

  - does everything the other jump robots does
  ☐ turned up to eleven

Water level

Water Level (01)

- Swim Robot

  ☐ starts swiming when activated (on ground if not)
  ☐ helps get over water
  ☐ blocks passages sometimes

Water Level (02)

Water Level (03)

Water Level (04)

Water Level (FINAL)

Gravity Level

Gravity Level (01)

- Vertical Gravity Robot

  ☐ starts falling up and down
  ☐ helps get over the ground
  ☐ blocks passages sometimes

Gravity Level (02)

- Change Gravity Robot

  ☐ starts changeing the gravity for player
  ☐ helps get over the ground
  ☐ blocks passages sometimes

Gravity Level (03)

- Horrizontal Gravity Robot

  ☐ starts falling left and right

Gravity Level (04)

- Bullet Gravity Robot

  - [] Acctracts bullets

Gravity Level (FINAL)

- Gravity Boss Robot

  ☐ turns up to eleven

Fire Level

Fire Level (01)

- Fire Robot

  ☐ starts burining when activated
  ☐ helps get over Fire
  ☐ blocks passages sometimes

Fire Level (02)

- Fire explosion Robot

  ☐ starts exploding when activated

Fire Level (03)

- Fire shooting Robot

  ☐ starts shooting fire when activated

Fire Level (04)

- Fire X Robot

  ☐ starts x fire when activated

Fire Level (FINAL)

- Fire Boss Robot

☐ turns up to eleven

Electro Level

Electro Level (01)

• Electo Robot

☐ starts electrifying when activated
☐ activates other robots
☐ blocks passages sometimes

Electro Level (02)

• Electo Shooting Robot

☐ starts shooting charges when activated
☐ activates other robots

Electro Level (03)

• Electo Jump Shooting Robot

☐ starts jumping shooting charges when activated
☐ activates other robots

Electro Level (04)

Electro Level (FINAL)

Laser Level

Laser Level (01)

• Swim Robot

> ☐ starts swiming when activated (on ground if not)
> ☐ helps get over Laser
> ☐ blocks passages sometimes

Laser Level (02)

Laser Level (03)

Laser Level (04)

Laser Level (FINAL)

Light Level

Light Level (01)

- Light Robot

> ☐ starts lighting

Light Level (02)

Light Level (03)

Light Level (04)

Light Level (FINAL)

Wind Level

Wind Level (01)

- Wind Robot

> ☐ starts blowing wind
> ☐ blocks passages sometimes

Wind Level (02)

Wind Level (03)

Wind Level (04)

Wind Level (FINAL)

TODO

☐ HIT ANIMATION
☐ Hero sticky must be resolved better
☐ Jump robots dont push you through platforms (damage penalty) or phase through object
☐ Push robots into the robot array when certain conditions are met