Farm
Dokumentáció

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Felhasználói kézikönyv

A Farm egy farm menedzsment játék, ahol a játékosnak egy kertet kell gondoznia, abba növényeket ültetnie, valamint azokat le kell aratnia.

A játékos a programot megnyitva a főmenüben kezd, ahonnan közvetlen ki tud lépni, be tudja tölteni egy korábbi játékállását, abban az esetben, ha már játszott a játékkal, vagy kezdhet egy újat.

Új játék kezdése:
Új játék kezdésekor a játékosnak meg kell adnia a nevét, valamint, hogy milyen nehézségen akar játszani. A nehézség függvényében változik a kert nagysága.
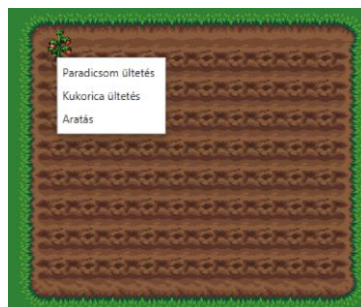
Játék mentése-betöltése:
A játék automatikusan elmenti az adott játékállást minden kilépéskor, és a játék indításakor van lehetősége ennek betöltésére a főmenüből. Ha a játékos egy új játékot kezd, akkor a korábbi játékállását nem tudja betölteni, mivel a program az új játékot menti el.
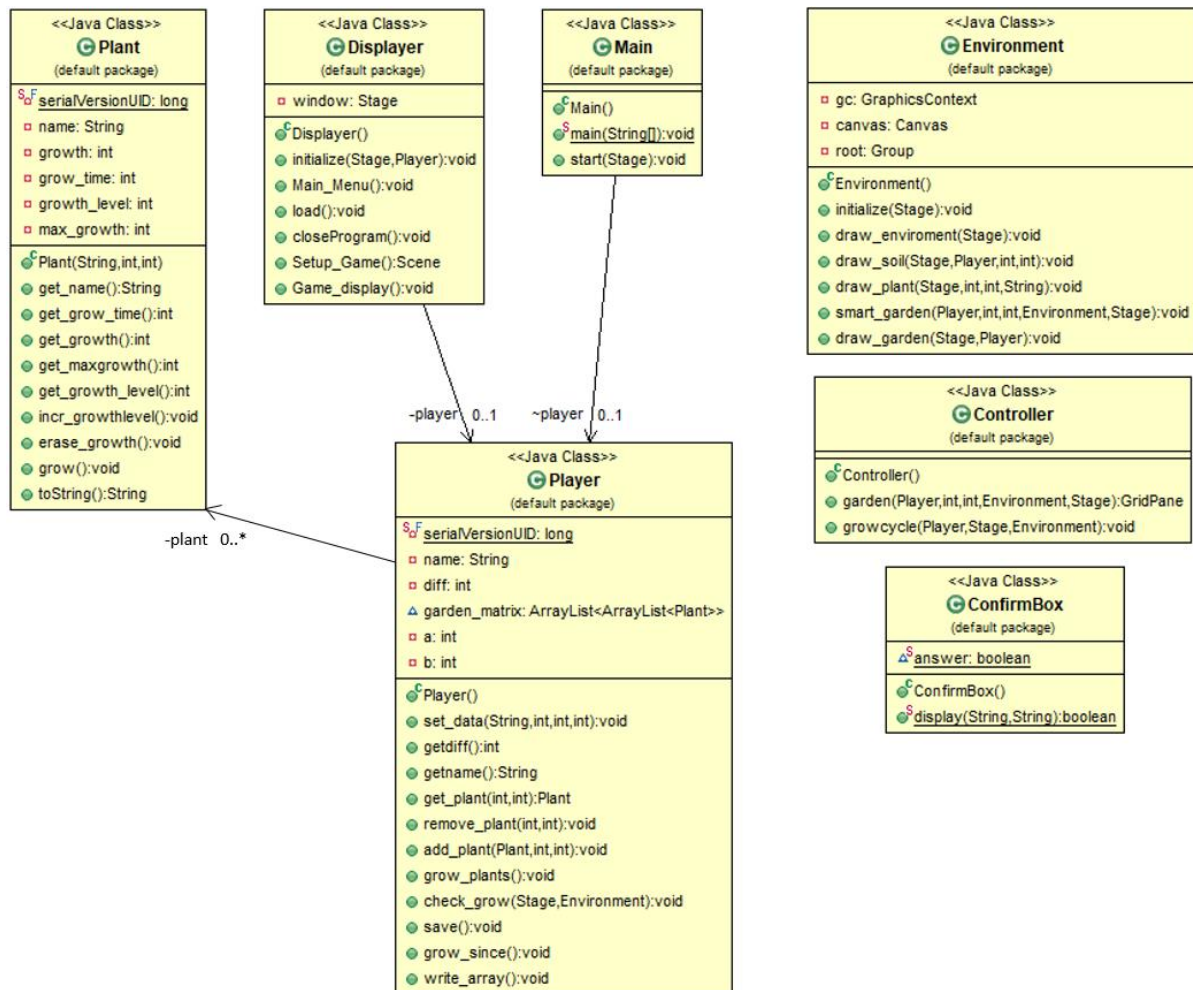
A játék menete:
A kertben egy-egy parcellára kattintva jobb klikkel lehetséges az ültetés, valamint aratás.

A növényt elültetve az növésnek indul és a paradicsom esetében 5 másodpercenként nő egy-egy fázist, míg el nem éri a végső (4.-ik) fázist amikor már teljesen megnőtt és le lehet aratni. Minden növénynek különböző növési ideje van, a paradicsom nő a leggyorsabban. Miután megnőtt, ugyanígy a növényre jobb klikkelve lehet learatni a növényt.

Class Diagram

<<Java Class>>
Ⓖ Plant
(default package)

- ^S_o^F serialVersionUID: long
- ▫ name: String
- ▫ growth: int
- ▫ grow_time: int
- ▫ growth_level: int
- ▫ max_growth: int

- Ⓒ Plant(String,int,int)
- ● get_name():String
- ● get_grow_time():int
- ● get_growth():int
- ● get_maxgrowth():int
- ● get_growth_level():int
- ● incr_growthlevel():void
- ● erase_growth():void
- ● grow():void
- ● toString():String

<<Java Class>>
Ⓖ Displayer
(default package)

- ▫ window: Stage

- Ⓒ Displayer()
- ● initialize(Stage,Player):void
- ● Main_Menu():void
- ● load():void
- ● closeProgram():void
- ● Setup_Game():Scene
- ● Game_display():void

<<Java Class>>
Ⓖ Main
(default package)

- Ⓒ Main()
- ^S main(String[]):void
- ● start(Stage):void

<<Java Class>>
Ⓖ Environment
(default package)

- ▫ gc: GraphicsContext
- ▫ canvas: Canvas
- ▫ root: Group

- Ⓒ Environment()
- ● initialize(Stage):void
- ● draw_enviroment(Stage):void
- ● draw_soil(Stage,Player,int,int):void
- ● draw_plant(Stage,int,int,String):void
- ● smart_garden(Player,int,int,Environment,Stage):void
- ● draw_garden(Stage,Player):void

<<Java Class>>
Ⓖ Controller
(default package)

- Ⓒ Controller()
- ● garden(Player,int,int,Environment,Stage):GridPane
- ● growcycle(Player,Stage,Environment):void

<<Java Class>>
Ⓖ ConfirmBox
(default package)

- △^S answer: boolean

- Ⓒ ConfirmBox()
- Ⓢ display(String,String):boolean

-player 0..1   ~player 0..1

-plant 0..*

<<Java Class>>
Ⓖ Player
(default package)

- ^S^F serialVersionUID: long
- ▫ name: String
- ▫ diff: int
- △ garden_matrix: ArrayList<ArrayList<Plant>>
- ▫ a: int
- ▫ b: int

- Ⓒ Player()
- ● set_data(String,int,int,int):void
- ● getdiff():int
- ● getname():String
- ● get_plant(int,int):Plant
- ● remove_plant(int,int):void
- ● add_plant(Plant,int,int):void
- ● grow_plants():void
- ● check_grow(Stage,Environment):void
- ● save():void
- ● grow_since():void
- ● write_array():void

Hierarchical Index

Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

Class Documentation

ConfirmBox Class Reference

Static Public Member Functions

static boolean display (String title, String message)
Create a ConfirmBox to close the program.

Detailed Description

Author
Hofi
Version
1.0
Since
2019-11-06
Definition at line 15 of file ConfirmBox.java.

Member Function Documentation

static boolean ConfirmBox.display (String *title*, String *message*)`[STATIC]`

Create a ConfirmBox to close the program.

Parameters

title	the title of the Box
message	the message which appears inside the box

Returns
return itself

Definition at line 24 of file ConfirmBox.java.

The documentation for this class was generated from the following file:
D:/STORE/Egyetem/Java programs/Farm_gradle/src/main/java/ConfirmBox.java

Controller Class Reference

Public Member Functions

GridPane **garden** (Player player, int x, int y, Environment environment, Stage window)
> *Makes the garden clickable, and sets the ContextMenu for the player.*

void **growcycle** (Player player, Stage window, Environment e)
> *The cycle which grows the plants and increase their growth level.*

Detailed Description

Author
> Hofi

Version
> 1.0

Since
> 2019-11-06

Definition at line 19 of file Controller.java.

Member Function Documentation

GridPane Controller.garden (Player *player*, int *x*, int *y*, Environment *environment*, Stage *window*)

Makes the garden clickable, and sets the ContextMenu for the player.

The player with this can plant and harvest.

Parameters

player	to use the players data
x	the first tiles position
y	the first tiles position
environment	with this can the function draw elements
window	the actual used window

Returns
> returns the gridpane which is drawed to the screen

Definition at line 29 of file Controller.java.

void Controller.growcycle (Player *player*, Stage *window*, Environment *e*)

The cycle which grows the plants and increase their growth level.

Parameters

player	to use the players data

window	the actual window
e	the used environment

Definition at line 124 of file Controller.java.

The documentation for this class was generated from the following file:

    D:/STORE/Egyetem/Java programs/Farm_gradle/src/main/java/Controller.java

Displayer Class Reference

Public Member Functions

void initialize (Stage PrimaryStage, Player p)
  Initialize and creates the window.

void Main_Menu ()
  Draws the main menu's background and add 3 button to it.

void load ()
  In case of load, it loads the players data from the 'farm_save' named file.

void closeProgram ()
  It closes the program, and shuts down the javafx.

Scene Setup_Game ()
  Draws the setup game menu, and add an observable list to it to set the difficulty of the game, a text field to write the players name and 2 button.

void Game_display ()
  Calls the environment class to draw the ingame textures.

Detailed Description

Author
  Hofi
Version
  1.0
Since
  2019-11-06
Definition at line 26 of file Displayer.java.

Member Function Documentation

void Displayer.closeProgram ()

It closes the program, and shuts down the javafx.
Definition at line 158 of file Displayer.java.

void Displayer.Game_display ()

Calls the environment class to draw the ingame textures.

Definition at line 230 of file Displayer.java.

void Displayer.initialize (Stage *PrimaryStage*, Player *p*)

Initialize and creates the window.

Add title, icon to it and sets the size and align of the window.

On close request calls the closeProgram function

Parameters

PrimaryStage	gets the actual stage
p	the player

Definition at line 39 of file Displayer.java.

void Displayer.load ()

In case of load, it loads the players data from the 'farm_save' named file.

Definition at line 113 of file Displayer.java.

void Displayer.Main_Menu ()

Draws the main menu's background and add 3 button to it.

Sets the actions of the buttons.

Definition at line 62 of file Displayer.java.

Scene Displayer.Setup_Game ()

Draws the setup game menu, and add an observable list to it to set the difficulty of the game, a text field to write the players name and 2 button.

Returns

Scene

Definition at line 170 of file Displayer.java.

The documentation for this class was generated from the following file:

D:/STORE/Egyetem/Java programs/Farm_gradle/src/main/java/Displayer.java

Environment Class Reference

Public Member Functions

void initialize (Stage window)
    Initialize the environment and sets the drawing canvas and graphichs context.

void draw_enviroment (Stage window)
    Loads the picture and draws the statics on the screen.

void draw_soil (Stage window, Player player, int x, int y)
    Draws the garden which size is depends on the players difficulty choice.

void draw_plant (Stage window, int a, int b, String type)
    Draw a selected plant in the given position.

void smart_garden (Player player, int x, int y, Environment environment, Stage window)
    This function calls the controller class functions.

void draw_garden (Stage window, Player player)
    Redraw the garden by the players stored data.

Detailed Description

Author
    Hofi
Version
    1.0
Since
    2019-11-06
Definition at line 17 of file Environment.java.

Member Function Documentation

void Environment.draw_enviroment (Stage *window*)

Loads the picture and draws the statics on the screen.

Parameters

window	get the actual window to draw on it

Definition at line 41 of file Environment.java.

void Environment.draw_garden (Stage *window*, Player *player*)

Redraw the garden by the players stored data.

Parameters

window	get the actual window to draw on it
player	to use the players data

Definition at line 326 of file Environment.java.

void Environment.draw_plant (Stage *window*, int *a*, int *b*, String *type*)

Draw a selected plant in the given position.

Parameters

window	get the actual window to draw on it
a	the x pos for the plant
b	the y pos for the plant
type	what type of plant to draw

Definition at line 279 of file Environment.java.

void Environment.draw_soil (Stage *window*, Player *player*, int *x*, int *y*)

Draws the garden which size is depends on the players difficulty choice.

Parameters

window	get the actual window to draw on it
player	gets the player to use its data for the gardens size
x	the top left x pos
y	the top left y pos

Definition at line 223 of file Environment.java.

void Environment.initialize (Stage *window*)

Initialize the environment and sets the drawing canvas and graphichs context.

Parameters

window	get the actual window to draw on it

Definition at line 26 of file Environment.java.

void Environment.smart_garden (Player *player*, int *x*, int *y*, Environment *environment*, Stage *window*)

This function calls the controller class functions.

Parameters

player	to use the players data
x	the position of the first tile

y	the position of the first tile
environment	with this can the controller class call to draw
window	get the actual window to draw on it

Definition at line 313 of file Environment.java.

The documentation for this class was generated from the following file:

D:/STORE/Egyetem/Java programs/Farm_gradle/src/main/java/Environment.java

Main Class Reference

Public Member Functions

void start (Stage PrimaryStage)

    Starts the main program, and opens the main menu.

Static Public Member Functions

static void main (String[] args)

    Initialize and starts the JavaFX.

Detailed Description

Author

    Hofi

Version

    1.0

Since

    2019-11-06

Definition at line 10 of file Main.java.

Member Function Documentation

static void Main.main (String[] *args*) `[STATIC]`

Initialize and starts the JavaFX.

Parameters

args	JavaFX args

Definition at line 19 of file Main.java.

void Main.start (Stage *PrimaryStage*)

Starts the main program, and opens the main menu.

Definition at line 27 of file Main.java.

The documentation for this class was generated from the following file:

D:/STORE/Egyetem/Java programs/Farm_gradle/src/main/java/Main.java

Plant Class Reference

Public Member Functions

Plant (String n, int t, int u)
String get_name ()
int get_grow_time ()
int get_growth ()
int get_maxgrowth ()
int get_growth_level ()
void incr_growthlevel ()
void erase_growth ()
void grow ()
String toString ()

Detailed Description

Definition at line 3 of file Plant.java.

Constructor & Destructor Documentation

Plant.Plant (String *n*, int *t*, int *u*)

Definition at line 15 of file Plant.java.

Member Function Documentation

void Plant.erase_growth ()

Definition at line 47 of file Plant.java.

int Plant.get_grow_time ()

Definition at line 27 of file Plant.java.

int Plant.get_growth ()

Definition at line 31 of file Plant.java.

int Plant.get_growth_level ()

Definition at line 39 of file Plant.java.

int Plant.get_maxgrowth ()

Definition at line 35 of file Plant.java.

String Plant.get_name ()

Definition at line 23 of file Plant.java.

void Plant.grow ()

Definition at line 51 of file Plant.java.

void Plant.incr_growthlevel ()

Definition at line 43 of file Plant.java.

String Plant.toString ()

Definition at line 56 of file Plant.java.

The documentation for this class was generated from the following file:

D:/STORE/Egyetem/Java programs/Farm_gradle/src/main/java/Plant.java

Player Class Reference

Public Member Functions

void set_data (String n, int d, int x, int y)
> *Sets the datas of the player.*

int getdiff ()
> *Returns the chosen difficulty.*

String getname ()
> *Returns the player's name.*

Plant get_plant (int i, int j)
> *gets the plant from the given cell*

void remove_plant (int i, int j)
> *Removes the plant from the given position.*

void add_plant (Plant p, int i, int j)
> *Adds a plant to the given cell.*

void grow_plants ()
> *Grows the planted plants in the garden.*

void check_grow (Stage window, Environment e)
> *Checks if the plant is growed enough, if yes then draw the next stage on it.*

void save ()
> *Serialize the player class.*

void grow_since ()

void write_array ()

    Write out the player class ArrayList for test purposes.

Detailed Description

Author

    Hofi

Version

    1.0

Since

    2019-11-06

Definition at line 12 of file Player.java.

Member Function Documentation

void Player.add_plant (Plant *p*, int *i*, int *j*)

Adds a plant to the given cell.

Parameters

p	the plant
i	the position
j	the position

Definition at line 84 of file Player.java.

void Player.check_grow (Stage *window*, Environment *e*)

Checks if the plant is growed enough, if yes then draw the next stage on it.

Parameters

window	the actual used window
e	the enviroment to draw

Definition at line 108 of file Player.java.

Plant Player.get_plant (int *i*, int *j*)

gets the plant from the given cell

Parameters

i	coordinate of the cell
j	coordinate of the cell

Returns

returns the plant

Definition at line 65 of file Player.java.

int Player.getdiff ()

Returns the chosen difficulty.

Returns

the chosen difficulty

Definition at line 47 of file Player.java.

String Player.getname ()

Returns the player's name.

Returns

the player's name

Definition at line 55 of file Player.java.

void Player.grow_plants ()

Grows the planted plants in the garden.

Definition at line 91 of file Player.java.

void Player.grow_since ()

Definition at line 164 of file Player.java.

void Player.remove_plant (int *i*, int *j*)

Removes the plant from the given position.

Parameters

i	the position fo the plant
j	the position fo the plant

Definition at line 74 of file Player.java.

void Player.save ()

Serialize the player class.

Definition at line 148 of file Player.java.

void Player.set_data (String *n*, int *d*, int *x*, int *y*)

Sets the datas of the player.

Parameters

n	name of the player
d	the chosen difficulty
x	the size of the garden
y	the size of the garden

Definition at line 28 of file Player.java.

void Player.write_array ()

Write out the player class ArrayList for test purposes.

Definition at line 188 of file Player.java.

The documentation for this class was generated from the following file:

D:/STORE/Egyetem/Java programs/Farm_gradle/src/main/java/Player.java