**Farm**

**Dokumentáció**

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S8F9EN

**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:

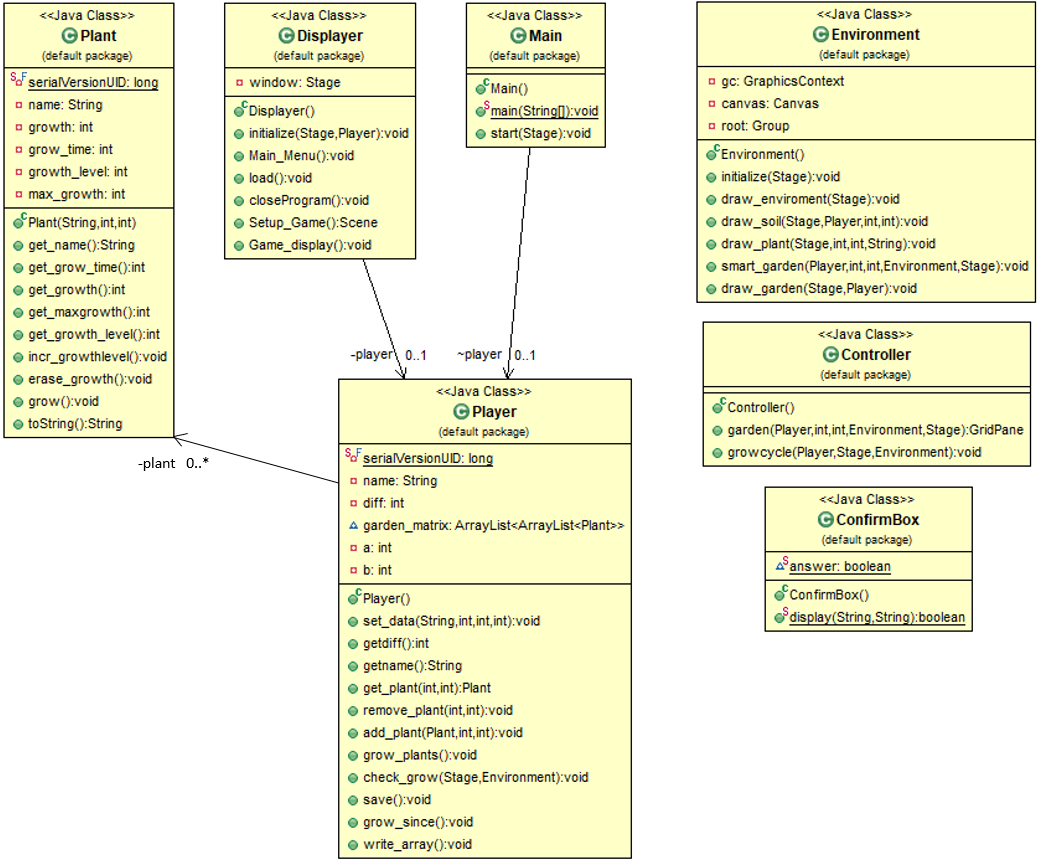
A kertben egy-egy parcellára kattintva jobb klikkel lehetséges az ültetés, valamint aratás.



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**



**Hierarchical Index**

**Class Hierarchy**

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**Class Documentation**

**ConfirmBox Class Reference**

**Static Public Member Functions**

static boolean [display](#page8) (String title, String message)

*Create a* [*ConfirmBox*](#page8) *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](#page8) 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](#page24)

**Controller Class Reference**

**Public Member Functions**

GridPane [garden](#page9) [(Player](#page20) player, int x, int y, [Environment](#page13) environment, Stage window)

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

void [growcycle](#page9) [(Player](#page20) player, Stage window, [Environment](#page13) 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**](#page20) ***player*, int *x*, int *y*,** [**Environment**](#page13) ***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**](#page20) ***player*, Stage *window*,** [**Environment**](#page13) ***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](#page25)

**Displayer Class Reference**

**Public Member Functions**

void [initialize](#page12) (Stage PrimaryStage, [Player](#page20) p)

*Initialize and creates the window.*

void [Main\_Menu](#page12) ()

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

void [load](#page12) ()

*In case of load, it loads the players data from the 'farm\_save' named file.*

void [closeProgram](#page11) ()

*It closes the program, and shuts down the javafx.*

Scene [Setup\_Game](#page12) ()

*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](#page11) ()

*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**](#page20) ***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](#page26)

**Environment Class Reference**

**Public Member Functions**

void [initialize](#page14) (Stage window)

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

void [draw\_enviroment](#page13) (Stage window)

*Loads the picture and draws the statics on the screen.*

void [draw\_soil](#page14) (Stage window, [Player](#page20) player, int x, int y)

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

void [draw\_plant](#page14) (Stage window, int a, int b, String type)

*Draw a selected plant in the given position.*

void [smart\_garden](#page14) [(Player](#page20) player, int x, int y, [Environment](#page13) environment, Stage window)

*This function calls the controller class functions.*

void [draw\_garden](#page14) (Stage window, [Player](#page20) 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**](#page20) ***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**](#page20) ***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](#page20) *player*, int *x*, int *y*,** [**Environment**](#page13) ***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](#page27)

**Main Class Reference**

**Public Member Functions**

void [start](#page17) (Stage PrimaryStage)

*Starts the main program, and opens the main menu.*

**Static Public Member Functions**

static void [main](#page16) (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](#page28)

**Plant Class Reference**

**Public Member Functions**

[Plant](#page18) (String n, int t, int u)

String [get\_name](#page19) ()

int [get\_grow\_time](#page19) ()

int [get\_growth](#page19) ()

int [get\_maxgrowth](#page19) ()

int [get\_growth\_level](#page19) ()

void [incr\_growthlevel](#page19) ()

void [erase\_growth](#page18) ()

void [grow](#page19) ()

String [toString](#page19) ()

**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](#page29)

**Player Class Reference**

**Public Member Functions**

void [set\_data](#page23) (String n, int d, int x, int y)

*Sets the datas of the player.*

int [getdiff](#page22) ()

*Returns the chosen difficulty.*

String [getname](#page22) ()

*Returns the player's name.*

[Plant](#page18) [get\_plant](#page21) (int i, int j)

*gets the plant from the given cell*

void [remove\_plant](#page22) (int i, int j)

*Removes the plant from the given position.*

void [add\_plant](#page21) [(Plant](#page18) p, int i, int j)

*Adds a plant to the given cell.*

void [grow\_plants](#page22) ()

*Grows the planted plants in the garden.*

void [check\_grow](#page21) (Stage window, [Environment](#page13) e)

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

void [save](#page22) ()

*Serialize the player class.*

void [grow\_since](#page22) ()

void [write\_array](#page23) ()

*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**](#page18) ***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**](#page13) ***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**](#page18) **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](#page30)