WORD

FANTASY

By DoubleB

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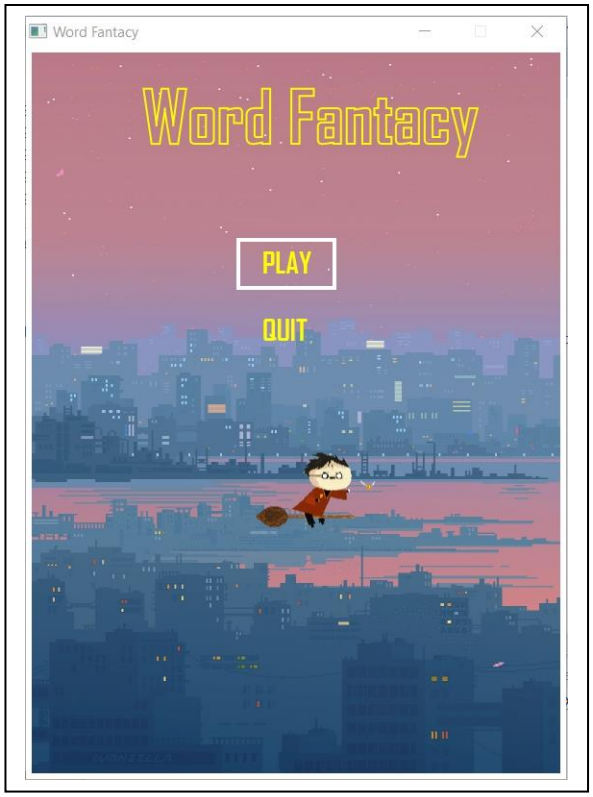
About Game

“Word Fantasy” is a block breaker endless game made from JAVA FX. We are wizard and our mission is protect our city from word block. The word block was sent by devil to destroy the city. We need to cast spells to destroy word block that fall into the city. And this game we have the special spells to help you. Typing fastest as you possible.

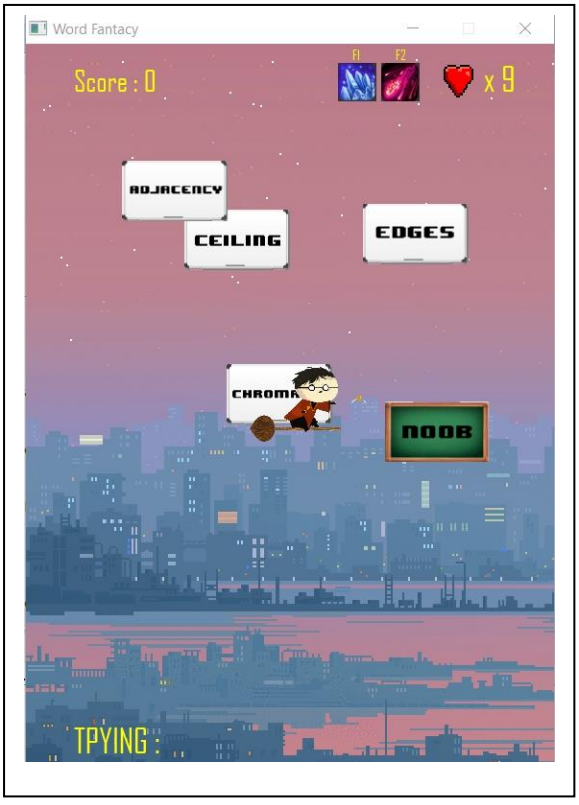


How To play

Main Menu

Select PLAY and then press Enter to start the game

or select QUIT to exit the game.



Game Scene

Top left corner shows your current score.

Top right corner shows your current life

and the skills you have.

Each blocks will have the text to show word.

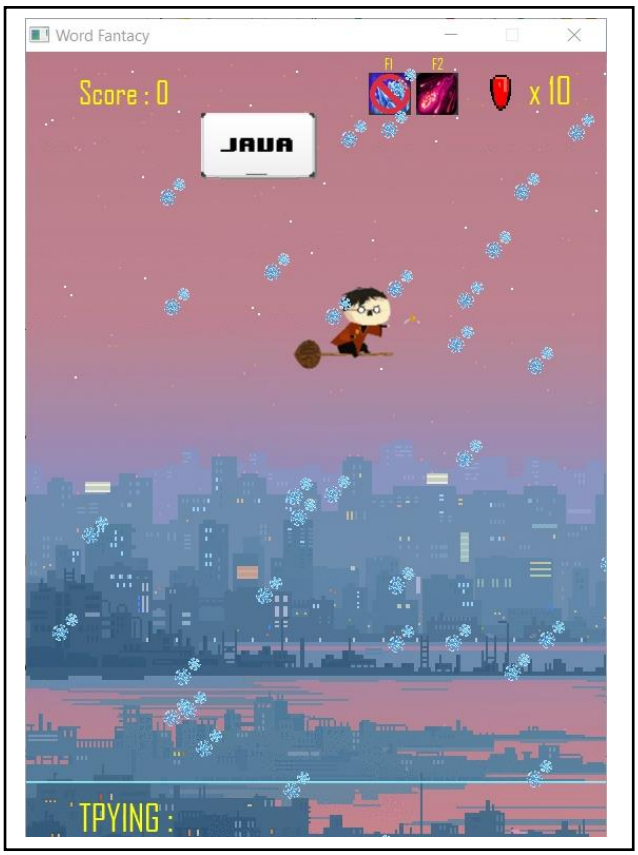
Bottom of the window show your tpying.

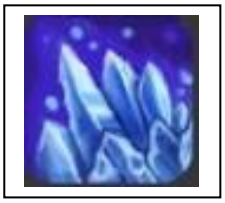
Controlling

Use the keyboard to tpying the word and press the Enter button to cast a spell.

If your word matches the text on the blocks in the window the wizard will cast spells to destroy the box and you will get 1 point. If word block can fall into the city. You will lose 1 life .

Special Skill





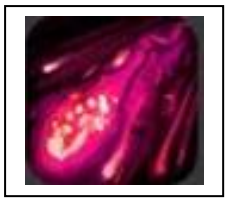
Snowskill :

You will need to press F1 button to cast a spell using this skill.

It's will help you to slow the word blocks

and the screen will show the snowing effect

* You can use this skill only once per game.



Fireskill :

You will need to press F1 button to cast a spell

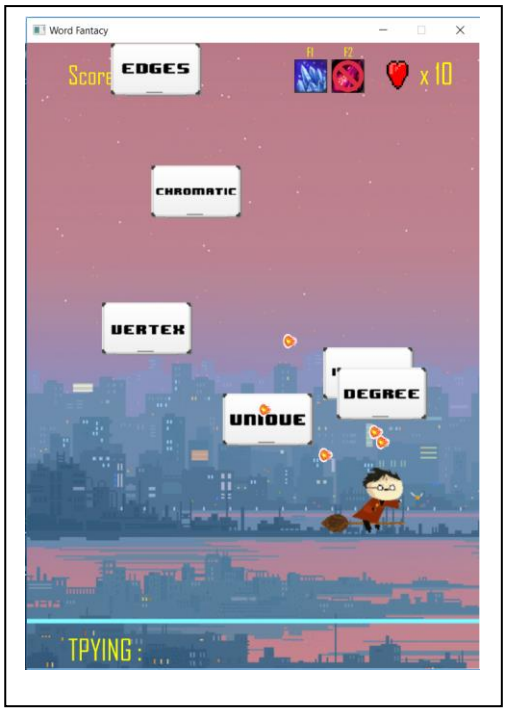
using this skill.

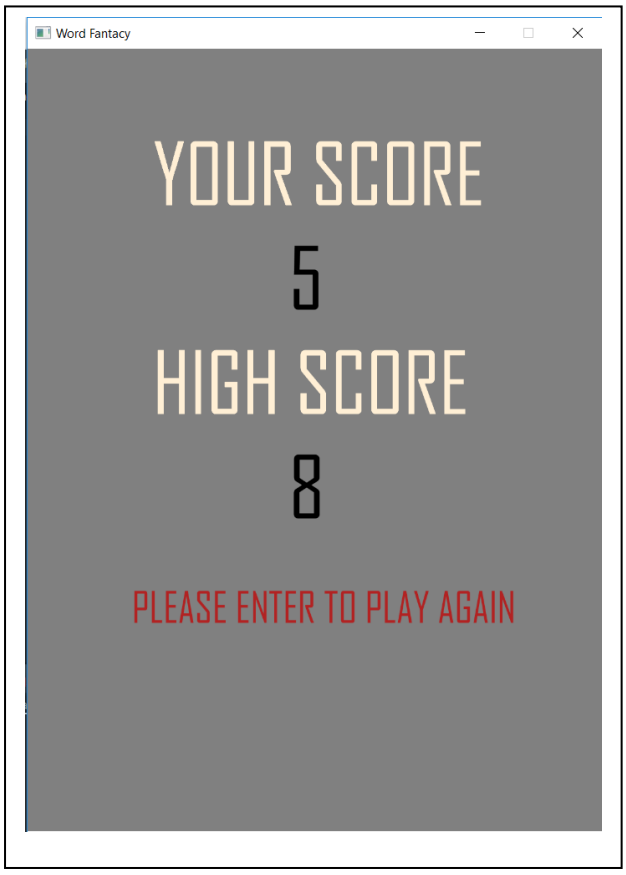
It's will help you to destroy all word blocks on the

thescreen

and the screen will show the fire effect

* You can use this skill only once per game.

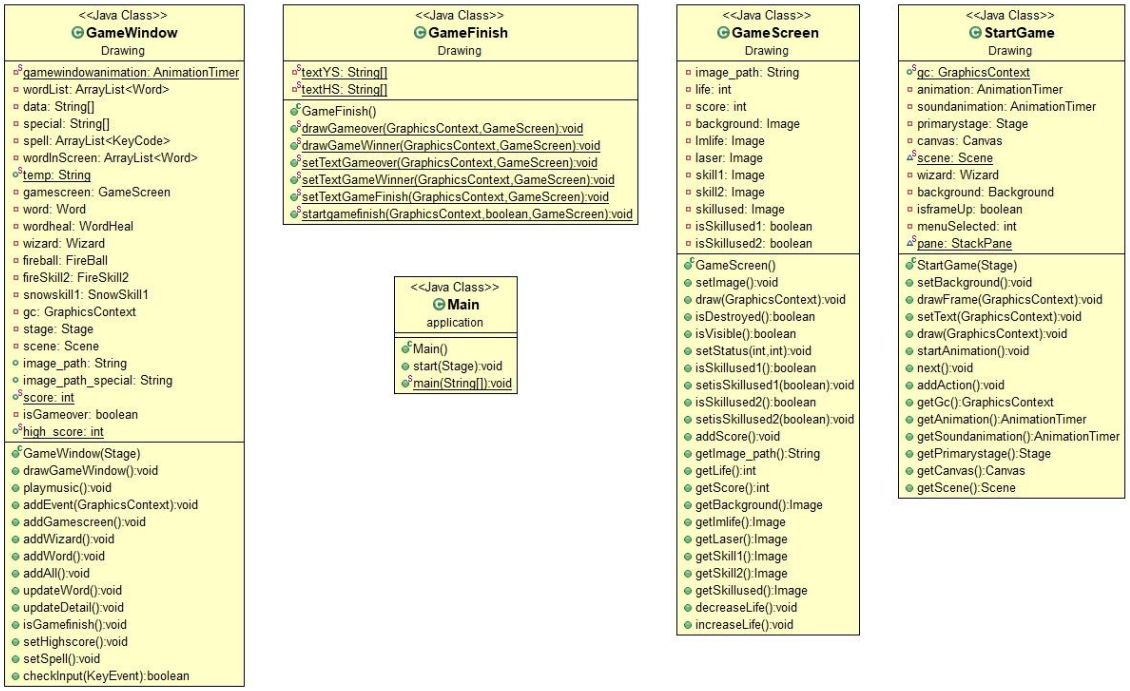


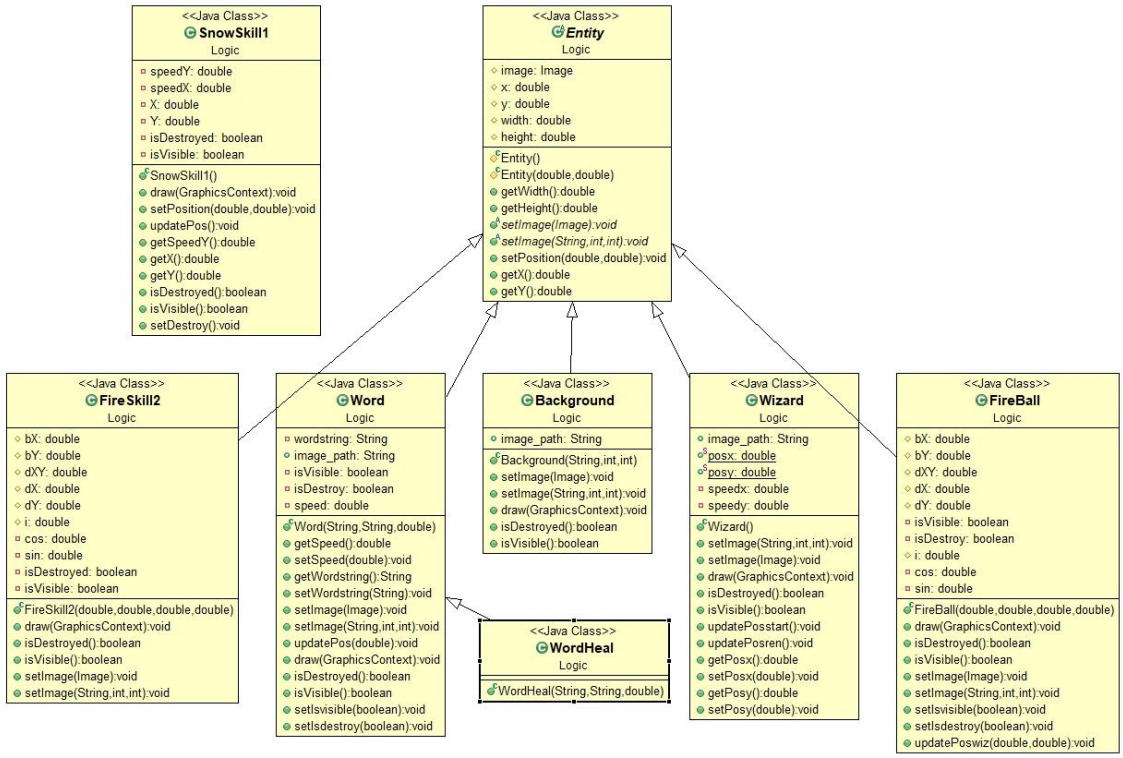


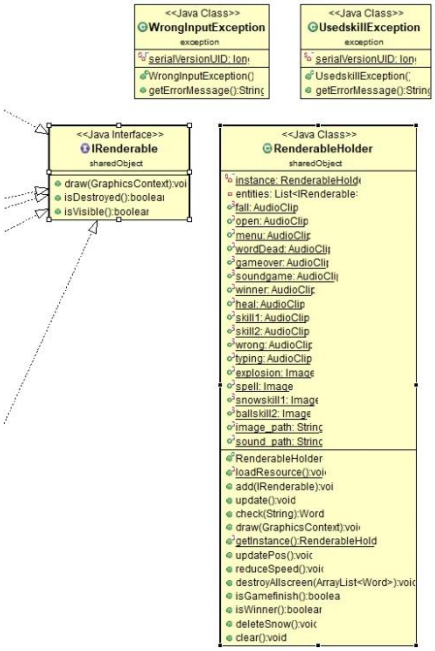
Game over Scene

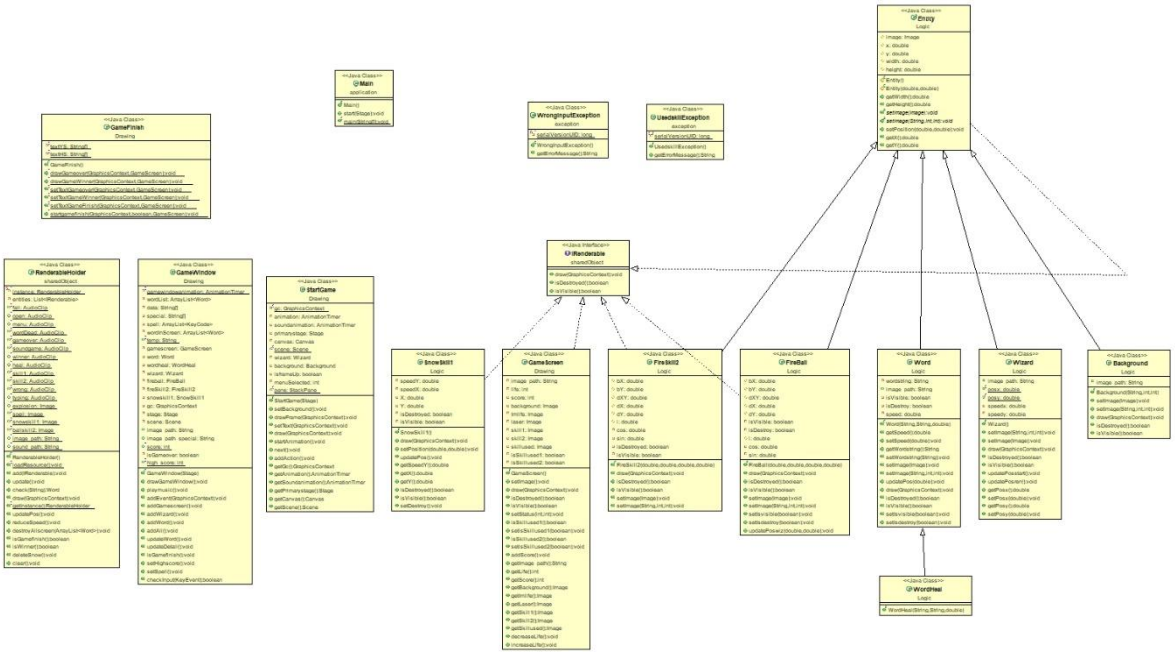
You can try again by press the Enter button.

Implementation Details






<<Java Class>>
WrongInputException
exception
serialVersionUID: long
WrongInputException()
getErrorMessage():String
<<Java Class>>
UsedskillException
exception
serialVersionUID: long
UsedskillException(
getErrorMessage():String
<<Java Interface>>
IRenderable
sharedObject
draw(GraphicsContext):voi
isDestroyed():boolea
isVisible():boolea
<<Java Class>>
RenderableHolder
sharedObject
instance: RenderableHold
entities: List<IRenderable>
fall: AudioClip
open: AudioClip
menu: AudioClip
wordDead: AudioClip
gameover: AudioClip
soundgame: AudioClip
winner: AudioClip
heal: AudioClip
skill1: AudioClip
skill2: AudioClip
wrong: AudioClip
typing: AudioClip
explosion: Image
spell: Image
snowskill1: Image
ballskill2: Image
image_path: String
sound_path: String
RenderableHolder
loadResource():voi
add(IRenderable):voi
update():void
check(String):Word
draw(GraphicsContext):voi
getInstance():RenderableHold
updatePos():voi
reduceSpeed():voi
destroyAllscreen(ArrayList<Word>):voi
isGamefinish():boolea
isWinner():boolea
deleteSnow():voi
clear():void


Main
application
GameFinish
Drawing
WrongInputException
exception
UsedskillException
exception
Enjoy
Logic
IRenderable
sharedObject
RenderableHolder
sharedObject
GameWindow
Drawing
StartGame
Drawing
SnowSkill1
Logic
GameScreen
Drawing
FireSkill2
Logic
FireBall
Logic
Word
Logic
Wizard
Logic
Background
Logic
WordHeal
Logic

1.Package application

1.1 Class Main extends Application

1.1.1 Method

+ void start (Stage stage)	The main entry point for the JavaFX applications.
+ void main (String[] args)	An entry point of the application.

2.Package Drawing

2.1 Class StartGame

2.1.1 Field

+ GraphicsContext gc	Drawing operations to render
- AnimationTimer animation	Class AnimationTimer to support animation
-AnimationTimer soundanimation	Class AnimationTimer to support sound
-Stage primarystage	Primary stage
-Canvas canvas	Canvas of game screen
+ Scene scene	Scene of StartGame
-Wizard wizard	Wizard in main menu
-Background background	Background of this scene
-boolean isframeUp	The truth of frame up
-int menuSelected	Value related to the position of the frame
+ StackPane pane	Pane of this scene

2.1.2 Constructor

+ StartGame(Stage primarystage)	- Crate new canvas with width = 550 and height = 750 - Set primarystage to given stage - Set primarystage resizable to be false - Set gc to canvas GraphisContext2D - Create new wizard - Play open sound in Class RenderableHolder - Create new Backgound with background image in position (0,0)

2.1.3 Method

+ void setBackground()	- Draw background and wizard with gc - Update position of wizard - Set the text name of game
+ void drawFrame(GraphicsContext gc)	- Draw the Frame is up or down
+ void setText(GraphicsContext gc)	- Set text play and quit
+ void draw(GraphicsContext gc)	- Set the scene with stackpane - Set background - Add action - Set primarystage about scene and title - Create animation and start - Create soundanimation and start
+ void startAnimation()	- Draw screen with gc
+ void next()	- Go to the next scene

+ void addAction()	- Set action about keypress
+ GraphicsContext getGc()	- Return this gc
+ AnimationTimer getAnimation()	- Return this animation
+ AnimationTimer getSoundanimation()	- Return this sound animation
+ Stage getPrimarystage()	- Return this primarystage
+ Canvas getCanvas()	- Return this canvas
+ Scene getScene()	- Return this scene

2.2 Class GameScreen implements IRenderable

2.2.1 Field

-String image_path	Image path of picture
-int life	Your life
-int score	Your score
-Image background	Background image
-Image imlife	Life image
-Image laser	Laser image
-Image skill1	Skill1 image
-Image skill2	Skill2 image
-Image skillused	Image when skill used
-boolean isSkillused1	True if skill1 has already been use
-boolean isSkillused2	True if skill2 has already been use

2.2.2 Constructor

+GameScreen()	- Set all image

2.2.3 Method

+ void setImage()	- Set all image
+ void draw(GraphicsContext gc)	- Draw all image - Set all text in screen
+ boolean isDestroyed()	- Return false
+ boolean isVisible()	- Return true
+ void setStatus(int life, int score)	- Set life and score with given value
+ boolean isSkillused1()	- Return isSkillused1
+ void setisSkillused1(boolean isSkillused1)	- Set value of isSkillused1
+ boolean isSkillused2 ()	- Return isSkillused2
+ void setisSkillused2(boolean isSkillused2)	- Set value of isSkillused2
+ void addScore()	- Add score
+ String getImage_path()	- Return image_path
+ int getLife()	- Return life
+ int getScore()	- Return score
+ Image getBackground()	- Return background
+ Image getimlife()	- Return life image
+ Image getLaser()	- Return laser image
+ Image getSkill1()	- Return skill1 image
+ Image getSkill2()	- Return skill2 image
+ Image getSkillused()	- Return skillused image
+ void decreaseLife()	- Decrease life

+ void increaseLife()	- Increase life

2.3 Class GameWindow extends Canvas

2.3.1 Field

- AnimationTimer gamewindowanimation	AnimationTimer to support animation in game window
- ArrayList<Word> wordList	List of Word object in this game
- String[] data	List of word in this game
- String[] special	List of special word in this game
- ArrayList<KeyCode> spell	List of Keycode
- ArrayList<Word> wordInScreen	List of Word in screen
+ String temp	Your typing string
- GameScreen gamescreen	Gamescreen of game
- Word word	Word class
- WordHeal wordheal	WordHeal class
- Wizard wizard	Wizard class
- FireBall fireball	FireBall class
- FireSkill2 fireskill2	FireSkill2 class
- SnowSkill1 snowskill1	Snowskill1 class
- GraphicsContext gc	Drawing operations to render
- Stage stage	Stage in gamewindow
- Scene scene	This scene
+ String image_path	Image path of word
+ String Image_path_specail	Image path of special word
+ int score	Score to show in the screen
- boolean isGameover	Ture if game over

+ boolean isCanEnter	True if can enter when game finish
+ int high_score	High score of the game
- boolean repeatedlyenter	True if you enter repeat

2.3.2 Constructor

+ GameWindow(Stage stage)	- Set this stage with given stage - Set gc to canvas GraphisContext2D - Set pane scene and stage - Add all object to game - Set the skill

2.2.3 Method

+ void drawGameWindow()	- Add all event about keyboard press - Play sound game music - Create gamewindowanimation and handle all update about object in the screen - Start gamewindowanimation
+ void playmusic()	- Play sound game in class RenderableHolder
+ void addEvent(GraphicsContext gc)	- Add all event about keyboard press
+ void addGamescreen()	- Create gamescreen and add to RenderableHolder
+ void addWizard()	- Create wizard and add to RenderableHolder

+ void addWord()	- Create all word in this game from wordlist and add to RenderableHolder
+ void addAll()	- Add gamescreen , word and wizard
+ void updateWord()	- Update position of all word
+ void updateDetail()	- Update all detail in the screen
+ void isGamefinish()	- If game finish set everything up to replay and save the high score
+ void setHighscore()	- Set highscore with highest score
+ void setSpell()	- Set the spell
+ boolean checkInput(KeyEvent k)	- Check the input key is right or wrong

2.4 Class GameFinish

2.4.1 Field

-String[] textYS	Array of character in “YOUR SCORE”
-string[] textHs	Array of character in “HIGH SCORE”

2.4.2 Method

+ void drawGameover(GraphicsContext gc, GameScreen gamescreen)	- Set text of game finish by gc - Set text of game over
+ void drawGameWinner(GraphicsContext gc, GameScreen gamescreen)	- Set text of game finish by gc - Set text of game winner

+ void setTextGameover(GraphicsContext gc, GameScreen gamescreen)	- Set text game over
+ void setTextGameWinner(GraphicsContext gc, GameScreen gamescreen)	- Set text game winner
+ void setTextGameFinish(GraphicsContext gc, GameScreen gamescreen)	- Set text game finish
+ void startgamefinish(GraphicsContext gc, boolean isGameover ,GameScreen gamescreen)	- If game over drawGameover - If game winner drawGameWinner

3.Package Logic

3.1 Class Entity implements IRenderable (abstract class)

3.1.1 Field

# Image image	Image of all entity in game
# double x	The x position of object
# double y	The y position of object
# double width	Width of object
# double height	Height of object

3.1.3 Constructor

# Entity(double x , double y)	- Set entity with given position

3.1.3 Method

+ double getWidth()	- Return width
+ double getHeight()	- Return height
+ *void setImage(Image i)*	- Set image of object with given image
+ *void setImage(String filename,int width , int height)*	- Set image of object with given file - Set width and height with given value
+ void setPosition(double x, double y)	- Set position of object with given value
+ double getX()	- Return x
+ double getY()	- Return y

3.2 Class Wizard extends Entity

3.2.1 Field

+ String image_path	Path of image
+ double posx	x position of wizard
+ double posy	y position of wizard
- double speedx	Speed in the x-axis of the wizard
- double speedy	Speed in the y-axis of the wizard

3.2.2 Constructor

+ Wizard()	- Set image of wizard - Set position of wizard

3.2.3 Method

+ void setImage(String filename ,int width , int height)	- Set image of wizard to given file - Set width and height to given value
+ void setImage(Image i)	- Set image of wizard with given image
+ void draw(GraphicContext gc)	- Draw Wizard on the screen
+ boolean isDestroyed()	- Return false
+ boolean isVisible()	- Return true
+ void updatePosstart()	- Update position of wizard in StartGame screen
+ void updatePosren()	- Update position of wizard in RenderableHolder
+ double getPosx()	- Return posx
+ void setPosx(double posx)	- Set posx with given value
+ double getPosy()	- Return posy
+ void setPosy(double posy)	- Ste posy with given value

3.3 Class Word extends Entity

3.3.1 Field

-String wordstring	Text of each Word
+ String image_path	Path of image
-boolean isVisble	True if Word on the screen
-boolean isDestroy	True if Word was destroyed

-double speed	Speed of Word

3.3.2 Constructor

+ Word(String wordstring, String image, double speed)	- Set wordstring ,image , speed to given value

3.3.3 Method

+ double getSpeed()	- Return speed
+ void setSpeed(double speed)	- Set speed with given value
+ String getWordstring()	- Return wordstring
+ void setWordstring(String wordstring)	- Set wordstring with given value
+ void setImage(Image i)	- Set image of Word with given image
+ void setImage(String filename, int width, int heidht)	- Set image of Word to given file - Set width and height to given value
+ void draw(GraphicsContext gc)	- Draw image to the screen
+ boolean isDestroyed()	- Return isDestroy
+ boolean isVisible()	- Return isVisible
+ void updatePos(double speed)	- Update position of Word
+ void setIsvisible(boolean isVisible)	- Set isVisible with given value
+ void setIsdestroy(boolean isDestroy)	- Set isDestroy with given value

3.4 Class WordHeal extends Word

3.4.1 Constructor

+ WordHeal(String wordstring, String image ,double speed)	- Create WordHeal with given value

3.5 Class FireBall extends Entity implements IRenderable

3.5.1 Field

- double bX	Starting position in x axis of FireBall
- double bY	Starting position in y axis of FireBall
- double dXY	Distance between start and end point of FireBall
- double dX	Distance between start and end point of FireBall in x axis
- double dY	Distance between start and end point of FireBall in y axis
- boolean isVisible	True if FireBall on the screen
- boolean isDestroy	True if FireBall was destroyed
- double i	Value used to calculate the path of the FireBall
- double cos	Cos of the angle between the displacement line and the x axis
- double sin	Sin of the angle between the displacement line and the y axis

3.5.2 Constructor

+ FireBall(double x, double y, double bX, double bY)	- Set the value of all variable in this class by calculating from the given value

3.5.3 Method

+ void draw(GraphicContext gc)	- Draw FireBall on the screen
+ boolean isDestroyed()	- Return isDestroy
+ boolean isVisible()	- Return isVisible
+ void setImage(Image i)	- Set image of FireBall with given image
+ void setImage(String filename, int width, int height)	- Do not thing
+ void setIsvisible(boolean Isvisible)	- Set isVisible with given value
+ void setIsdestroy(boolean isDestroy)	- Set isDestroy with given value
+ void updatePoswiz(double x , double y)	- Update position of Wizard in the screen

3.6 Class SnowSkill1 implements IRenderable

3.6.1 Field

-double speedY	Speed in the x-axis of the Snowskill1
-double speedX	Speed in the y-axis of the Snowskill1
-double X	x position of Snowskill1
-double Y	y position of Snowskill1
-boolean isDestroyed	True if Snowskill1on the screen

-boolean isVisible	True if Snowskill1 was destroyed

3.6.2 Constructor

+ SnowSkill1()	- Create Snowskill1 by random position x and y and set isDestroyed and isVisible to default

3.6.3 Method

+ void draw(GraphicsContext gc)	- Draw Snowskill1 on the screen
+ void setPosition(double x, double y)	- Set position of Snowskill1 with given value
+ void updatePos()	- Update position of Snowskill1
+ double getSpeedY()	- Return speedY
+ boolean isDestroyed()	- Return isDestroyed
+ double getX()	- Return X
+ double getY()	- Return Y
+ boolean isVisible()	- Return isVisible
+ void setDestroy()	- Set value of isDestroyed

3.6 Class FireSkill2 extends Entity implements IRenderable

3.6.1 Field

- double bX	Starting position in x axis of Fireskill2
- double bY	Starting position in y axis of Fireskill2

- double dXY	Distance between start and end point of FireSkill2
- double dX	Distance between start and end point of FireSkill2 in x axis
- double dY	Distance between start and end point of FireSkill2 in y axis
- double i	Value used to calculate the path of the FireSkill2
- double cos	Cos of the angle between the displacement line and the x axis
- double sin	Sin of the angle between the displacement line and the y axis
- boolean isDestroyed	True if FireSkill2 on the screen
- boolean isVisible	True if FireSkill2 was destroyed

3.6.2 Constructor

+ FireSkill2(double x, double y, double bX, double bY)	- Set the value of all variable in this class by calculating from the given value

3.6.3 Method

+ void draw(GraphicsContext gc)	- Draw Fireskill2 on the screen
+ boolean isDestroyed()	- Return isDestroy
+ boolean isVisible	- Return isVisible
+ void setImage(Image i)	- Set image of FireSkill2 with given image

+ void setImage(String filename, int width, int height)	- Do not thing

3.7 Class Background extends Entity

3.7.1 Field

+ String image_path	Path of background image

3.7.2 Constructor

+ Background(String I, int width , int height)	Set iamge and position of Background

3.7.3 Method

+ void setImage(Image i)	- Set image of wizard with given image
+ void setImage(String filename, int width, int height)	- Set image of wizard to given file - Set width and height to given value
+ void draw(GraphicsContext gc)	- Draw Background on the screen
+ boolean isVisible()	- Return false
+ boolean isDestroyed()	- Return true

4.Package sharedObject

4.1 Interface IRenderable

4.1.1 Method

+ void draw(GraphicsContext gc)	- Interface methods
+ boolean isDestroyed()	- Interface methods
+ boolean isVisible()	- Interface methods

4.2 Class RenderableHolder

4.2.1 Field

- RenderableHolder instance	RenderableHolder used in this game
- List<IRenderable> entities	List of all entity in game
+ AudioClip fall	Fall sound
+ AudioClip open	Open sound
+ AudioClip menu	Menu sound
+ AudioClip wordDead	wordDead sound
+ AudioClip gameover	Game over sound
+ AudioClip soundgame	Game sound
+ AudioClip winner	Winner sound
+ AudioClip heal	Heal sound
+ AudioClip skill1	Skill1 sound
+ AudioClip skill2	Skill2 sound
+ AudioClip wrong	Wrong sound

+ AudioClip typing	Typing sound
+ AudioClip backmenu	Backmenu sound
+ Image spell	Spell image
+ Image snowskill1	Snowskill1 image
+ Image ballskill2	Ballskill2 image
+ String image_path	Path of image
+ String sound_path	Path of sound

4.2.2 Constructor

+ RenderableHolder()	- Create new ArrayList of IRenderable name entities

4.2.3 Method

+ void loadResource()	- Load all sound and image in the game from res
+ void add(IRenderable entity)	- Add given entity to entities
+ void update()	- Remove all destroyed entity
+ Word check(String temp)	- Check all Word on the screen when it has the same text as temp it will be destroyed
+ void draw(GraphicsContext gc)	- Draw all entity on the screen
+ RenderableHolder getInstance()	- Return instance
+ void updatePos()	- Update position of all object in the screen
+ void reduceSpeed()	- Reduce the speed of all Words

+ void destroyAllscreen(ArrayList<Word> wordInScreen)	- Destroy all Words on the screen
+boolean isGamefinish()	- Return true if game finish - Otherwise return false
+ boolean isWinner()	- Return true if win the game - Otherwise return false
+ void deleteSnow()	- Remove all snow on the screen
+ void clear()	- Clear list of all entities

5.Package exception

5.1 Class UsedskillException extends Exception

5.1.1 Field

- final long serailVersionUID	Set to 1L

5.1.2 Method

+ String getErrorMessage()	- Return massage “Can’t use a skill because the skill is already used”

5.2 Class WrongInputException extends Exception

5.2.1 Field

- final long serailVersionUID	Set to 1L

5.2.2 Method

+ String getErrorMessage()	- Return massage “Your input is wrong. You must input in English alphabet”