Import java awt

Import javax swing

Import java io

Class Asteroids\_Kunal extends JFrame

Create java.util timer

Initialize private boolean isRunning to true

Create random to ran

Initialize boolean first to true and displayLeaderboards to false

Initialize integers highscore to 0, health to 0 and rand

Initialize 2d integer array aster to 1,000 by 7 and bullets to 10,000 by 5

Initialize integer totalAsteroids to 1,000 and fired to 0

Initialize integer x to 400

Initialize integer y to 400

Initialize integer wid to 100

Initialize integer len to 100

Initialize ImageIcon gif to explosion.gif

Initialize ImageIcon img to spaceshipUp.png

Initialize ImageIcon ast0 to asteroid0.png

Initialize ImageIcon ast1 to asteroid1.png

Initialize ImageIcon ast2 to asteroid2.png

Initialize ImageIcon bulletUp to bulletUp.png

Initialize ImageIcon bulletRight to bulletRight.png

Initialize ImageIcon bulletLeft to bulletLeft.png

Initialize ImageIcon bulletDown to bulletDown.png

Initialize ImageIcon healthBar to healthBar.png

Initialize long start to the current time in milliseconds divided by 100

Initialize long time to the current time in milliseconds divided by 1000 - start divided by 10

Initialize move to current time in milliseconds over 100 minus start cast to int

Method Asteroids\_Kunal

Set the background colour to Black

Set the close operation to exit on close

Set the size of the screen to 1360, 700

Do not allow the user to resize the screen

Make the window visible

Run asteroids method

Create a key pressed listener(evt)

Create event handler pressed (evt)

Create a key released listener(evt)

Create event handler released (evt)

Create java.util timer

Create timer scheduler for 60 schedules per second

Class LoopyStuff extended with java.util TimerTask

Create void method run

Run update method

Run repaint method

If boolean isRunning is false stop Timer

Void method update

Update long time to current time in milliseconds / 1000 - start/10

Update move to current time in milliseconds/100 - start

If down key is pressed and the ship is within bounds

Move the ship 10 pixels down

Update width and height

Update image to spaceshipDown.png

If up key is pressed and the ship is within bounds

Move the ship 10 pixels up

Update width and height

Update image to spaceshipUp.png

If left key is pressed and the ship is within bounds

Move the ship 10 pixels left

Update width and height

Update image to spaceshipLeft.png

If right key is pressed and the ship is within bounds

Move the ship 10 pixels right

Update width and height

Update image to spaceshipRight.png

If the spacebar is pressed

Add one to fired

Run the shoot method

For loop from 0 to totalAsteroids count by 1

Add the y value from aster[i][] from the starting position by move times 2

Update the other values of the array aster[i][]

For loop from 0 to fired count by 1

Check the direction the bullet was fired in and add or subtract accordingly in the x or y axis

Run bulletCollider, collision and repaint methods

Paint method (Graphics g)

Import super paint

Import graphics2d

Draw the spaceship at x,y

Create a font calibri

Set colour and font to white

Draw string on how long youv’e lasted at 60, 70

For loop from 0 to fired count by 1

Check the bullet direction of firing and Redraw accordingly based on the new coodinates

For loop from 0 to totalAsteroids count by 1

Check the asteroid image and Redraw accordingly based on the new coodinates

Redraw healthBar at 1200, 50

If displayleaderboards is true

Set the colour to blue

Create a rectangle to fill over the screen

Set the colour to white

Try file reader and bufferedreader at Highscores.txt

Initialize string s

Intitialize integer llen to 300

While input is not null

Draw string s as buffered input at 500, llen

Add 15 to llen

Close buffered reader

Catch exceptions

Void method bulletCollider()

For loop from 0 to totalAsteroid count by 1

For loop from 0 to fired count by 1

If bullets or asteroids have collided

Send both bullet and asteroid to oblivion

Add one to the highscore

Void method collision()

Try file writer fw at Highscores.txt

For all asteroids see if there has been a collision between the ship and the asteroid

If there is a collision

Subtract 1 from health

Redefine the healthbar imageicon

Create a joptionpane saying “You Crashed, You lost 1 health"

Send the collided asteroid to oblivion

Add 1 to the highscore

Boolean right, left, up, down, and space are set to false

If health becomes 0 set isRunning to false

Create a Joptionpane displaying explosion gif and a message for losing

Initialize a string name to a joptionpane for user input

Set the highscore to the time lasted times highscore

Filewriter write

If this is the first time writing write highscore on top then write the name and highscore

Else just write the highscore and name

File writer flush

Initialize integer restart to JOptionPane ConfirmDialog for weather the user would like to restart

If the user chooses to restart

Run reset method

Set isRunning to true

Set first to false

Else

Close file reader

Call repaint

Displayleaderboards to true

Catch IO Exception

Void method shoot()

Switch case direction

Based on direction up, down, left or right

Fire a bullet in the currently defined direction

Fire from the nose of the plane by defining coordinates

Set the direction of the bullet at the fifth column of the array

Repaint

Void method asteroids

For loop between 0 and totalAsteroids

Random integer rand from 0 to 1360

Set this as the x value of the array of the asteroids

Define the other coordinates of the asteroid

Define the collision points of the asteroid

Create a new random integer between 50 and 10050 and multiply by -1

Void integer reset()

Reset highscore to 0, health to 4, fired to 0, x to 400, y to 400, height to y + 92, width to x+ 85, direction to 1, healthbar to 4.png, stet time to current time /100, time to current time /1000 - start/10, and move to current time/ 100 -start

Call asteroids()

Initialize boolean left = false, right = false , up = false, down = false, space = false

Void method pressed (Keyevent evt)

Switch case for key events

If down, up, right, left or space are pressed set their respective booleans to true

Void method released (Keyevent evt)

Switch case for key events

If down, up, right, left or space are released set their respective booleans to false

Main Method

Run Asteroids\_Kunal method