INIT array of games to play without switching doors (gameList)

INIT array of games to play switching doors (gameList1)

SET number of games to play (NumOfGame)

INIT array of doors for games without door switch (NumOfDoor)

INIT array of doors for games with door switch (NumOfDoor1)

INIT array for statistics of games without switch (statistics)

INIT array for statistics of games with switch (statistics1)

ADD 3 new door objects into array of doors for games without switch (NumOfDoor)

ADD 3 new door objects into array of doors for games with switch (NumOfDoor1)

FOR number of games to play

ADD game object into array of games to play without switching doors (gameList)

ADD game object into array of games to play with switching doors (gameList1)

END FOR

FOR number of games to play

FOR number of doors to ADD

ADD new door object into game.doors attribute for games to play without switch (gameList.doors)

ADD new door object into game.doors attribute for games to play with switch (gameList1.doors)

END FOR

END FOR

CALL playGameNoSwitch with array of game object (gameList), number of games to play (NumOfGame),statistics array (statistics)

CALL playGameWithSwitch with array of game object (gameList1), number of games to play (NumOfGame),statistics array (statistics1)

CALL statistics.percentage

CALL statistics.percentage

CLASS Door

HAS attributes

number

isCar

opened

CLASS Game

HAS attributes

Doors []

doorPicked

openedGoatDoor

finalPick

won

CLASS Statistics

HAS attributes

gamesWithSameDoorWon

gamesWithSameDoorLost

gamesWithDoorChangeWon

gamesWithDoorChangeLost

HAS methodes

Logs gamesWithSameDoorWon (gamesWithSameDoorLost + gamesWithSameDoorWon) \* 100

Logs gamesWithDoorChangeWon (gamesWithDoorChangeLost + gamesWithDoorChangeWon) \* 100

FUNCTION playGameNoSwitch ( array of games , number of games to play, statistics array)

INIT random guess number (guess)

INIT random number that picks which door has a car (reset)

FOR number of games to play

SET random guess number (guess) to random number

SET random number that picks which door has a car (reset) to random number

SET all array of array.door.isCar to FALSE

SET a random array.door.isCar to TRUE with the number (reset)

SET array.doors.doorPicked and array.doors.finalPick to the (guess) number

IF array.door.finalPick has car THEN

ADD array of games to statistics.gamesWithSameDoorWon array

SET array.won to TRUE

ELSE IF array.door.finalPick does NOT have car THEN

ADD array of games to statistics.gamesWithSameDoorLost array

SET array.won to FALSE

END IF

END IF

END FOR

FUNCTION playGameWithSwitch ( array of games , number of games to play, statistics array)

INIT random guess number (guess)

INIT random number that picks which door has a car (reset)

FOR number of games to play

SET random guess number (guess) to random number

SET random number that picks which door has a car (reset) to random number

SET all array of array.door.isCar to FALSE

SET a random array.door.isCar to TRUE with the number (reset)

SET array.doors.doorPicked to the (guess) number

SET value of array.door.opned to TRUE to pick which array door to open, use array.doors.doorPicked

IF array.door.opened is FALSE AND array.door.isCar is FALSE THEN

SET array.doors.opened to TRUE

END IF

REPEAT FOR EACH ELEMENT IN INDEX

IF array.door.opened is FALSE THEN

SET array.doors.finalPick to door the door that has not yet been opened

END IF

REPEAT FOR EACH ELEMENT IN INDEX

IF array.door.finalPick has car THEN

ADD array of games to statistics.gamesWithDoorChangeWon array

SET array.won to TRUE

ELSE IF array.door.finalPick does NOT have car THEN

ADD array of games to statistics.gamesWithDoorChangeLost array

SET array.won to FALSE

END IF

END IF

END FOR