Import random class

Function pileSize ()

Declare integer a

Set integer a = random.randint(10,100)

Return integer a

End function

Function firstPlayer ()

Declare integer b

Set integer b = random.randint(0,1)

Return integer b

End function

Function difficulty ()

Declare integer c

Set integer c = random.randint(0,1)

Return integer c

End function

Function computer\_take(pileSize)

If difficulty = 1

If pileSize > 63 and pileSize <= 100

Set integer comp\_take = pileSize – 63

End if

Else if pileSize > 31 and pileSize <= 62

Set integer comp\_take = pileSize – 31

End else if

Else if pileSize > 15 and pileSize <= 30

Set integer comp\_take = pileSize -15

End else if

Else if pileSize > 7 and pileSize <= 14

Set integer comp\_take = pileSize – 7

End else if

Else if pileSize > 3 and pileSize <= 6

Set integer comp\_take = pileSize – 3

End else if

Else if pileSize > 1 and pileSize <= 2

Set integer comp\_take = pileSize – 1

End else if

Else

Set integer comp\_take = random.randint(1, pileSize//2)

End else

End if

Else

Set integer comp\_take = random.randint(1, pileSize//2)

End else

Return integer comp\_take

End function

Declare integer pileSize

Set integer pileSize = function pileSize ()

Declare integer firstPlayer

Set integer firstPlayer = function firstPlayer ()

Declare integer difficulty

Set integer difficulty = function difficulty ()

Print (‘Pile size:’, pileSize, ‘First player:’, firstPlayer, ‘Difficulty:’, difficulty)

If firstPlayer == 0

Print (‘Computer goes first’)

While True

Print (‘Computers turn’)

Set integer pileSize = pileSize – function comp\_take(pileSize)

Print (‘New Pile size:’, pileSize)

If pileSize == 1

Print (‘Computer Wins’)

Break the condition

Set integer user\_take = eval (input (‘Enter how many you will take:’)

While (user\_take > pileSize//2) or user\_take <= 0

Set integer user\_take = eval (input (‘Please enter a valid enter how many you will take’)

End while

Set integer pileSize = pileSize – user\_take

Print (‘New pile size:’, pileSize)

If pileSize == 1

Print (‘You Win!’)

Break the condition

End while

End if

Else if firstPlayer == 1

Print (‘You go first’)

While True

Set integer user\_take = eval (input (‘Enter how many you will take’)

While (user\_take > pileSize //2) or user\_take <= 0

Set integer user\_take = eval (input (‘Please enter a valid enter how many you will take:’))

End while

Set integer pileSize = pileSize – user\_take

Print (‘New pile size:’, pileSize)

If pileSize == 1

Print (‘You Win!’)

Break the condition

Set integer pileSize = pileSize – function comp\_take(pileSize)

Print (‘New pile size:’, pileSize)

If pileSize == 1

Print (‘Computer Wins’)

Break the condition

End while

End else if