

Pseudocode

Print Welcome to Loot Box Simulator

Create variables: gems, boxes, boxes_opened, total_spent

Initialise variables gems, boxes, boxes_opened, total_spent to 0

Create empty list called items

Create variable userInput and initialise to an empty string

Define function open_box that has parameter num_items which will be 4:

- Print message 'Opening loot box'

- Create empty list called itemList

- Generate a random number and assign to a variable

- For each item in num_items:

 - If the random number generated is between 1 and 5 inclusive:

 - Print item # of 4 is... Legendary item!

 - Append 'Legendary' into itemList

 - Else if the random number generated is between 6 and 15 inclusive:

 - Print item # of 4 is... Epic item!

 - Append 'Epic' into itemList

 - Else If the random number generated is between 16 and 50 inclusive:

 - Print item # of 4 is... Rare item!

 - Append 'Rare' into itemList

 - Else If the random number generated is between 51 and 100 inclusive:

 - Print item # of 4 is... Common item!

 - Append 'Common' into itemList

- Return itemList

While the user has not inputted 5:

- Print the number of gems and loot boxes the user currently has.

- Print the list of options the user can select:

 - 1) Buy Gems (550 gems for just \$19.95!)

 - 2) Buy Loot Box (costs 100 gems)

 - 3) Open Loot Box

 - 4) View Statistics

 - 5) Quit

If the user selects option 1:

- Add 550 to gems
- Add 19.95 to total_spent
- Print 'Thank you for your purchase'

Else if the user selects option 2:

- If there are at least 100 gems:
 - Subtract 100 from gems
 - Add 1 to boxes
 - Print 'Loot box purchased'

- Else:
 - Print 'Insufficient gems'

Else if the user selects option 3:

- If there are more than 0 boxes:
 - Minus 1 from boxes
 - Add 1 to boxes_opened
 - Call the open_box function with a parameter of 4
 - Extend the items list with the list returned from open_box

- Else:
 - Print 'Insufficient loot boxes'

Else if the user selects option 4:

- Print the total amount of money spent
- Print the total amount of loot boxes opened

- If at least 1 box has been opened:
 - Print the amount of legendary items received
 - Print the percentage of legendary items compared to the total number of items received

- Else:
 - Print 'Legendary items is 0 (0.0%)'

Else if the selects option 5:

- Print 'Goodbye'
- Break the while loop

- Else:
 - Print 'Invalid Choice'

End Program.