```
from google.colab import drive
drive.mount('/content/drive')
```

```
Drive already mounted at /content/drive; to attempt to forcibly remount, call drive.mount("/content/drive", force_remount
```

```
!pip install pyswip
```

```
Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/public/simple/
Requirement already satisfied: pyswip in /usr/local/lib/python3.8/dist-packages (0.2.10)
```

```
# importing libraries
import nltk
nltk.download('punkt')
from nltk.tokenize import word_tokenize
from nltk.stem import PorterStemmer
from pyswip import Prolog
```

```
[nltk_data] Downloading package punkt to /root/nltk_data...
[nltk_data]   Package punkt is already up-to-date!
```

```
print("Welcome to shopping mart")
print("Enter your name")
name = input()
print("Hello " + name + "! We are happy to serve you here at our shopping mart.")
print("What will state your occupation as:[student/employee/business]")
occ = input()
print("What category are you searching your products in: ")
print("We have these categories in our mart (electronics,furniture,household items)")
typ = input()

print("Would you like to use our auto set budgets or not")
choice = input()

choi = 0
lower = 0
upper = 0
```

```
Welcome to shopping mart
Enter your name
Teju bhai
Hello Teju bhai! We are happy to serve you here at our shopping mart.
What will state your occupation as:[student/employee/business]
I run a business
What category are you searching your products in:
We have these categories in our mart (electronics,furniture,household items)
i need some items for my house
Would you like to use our auto set budgets or not
yup
```

```
ps = PorterStemmer()

tok1 = word_tokenize(choice)
choilist = []
for wod in tok1:
    stem1 = ps.stem(wod)
    choilist.append(stem1)


for ele in choilist:
  if("y" in ele):
    choi =2
    choice = "yes"
    break
  else:
    choice = "no"
    choi = 1


tok2 = word_tokenize(typ)
typlist = []
for wod in tok2:
    stem1 = ps.stem(wod)
    typlist.append(stem1)
```

```
for ele in typlist:
  if("elec" in ele):
    typ = "electronics"
    break
  elif ("furn" in ele):
    typ = "furniture"
    break
  else:
    typ = "household"



tok3 = word_tokenize(occ)
occlist = []
for wod in tok3:
    stem1 = ps.stem(wod)
    occlist.append(stem1)


for ele in occlist:
  if(("stud" in ele) or ("read" in ele)):
    occ = "student"
    break
  elif (("emp" in ele) or ("work" in ele)):
    occ = "employee"
    break
  else:
    occ = "business"



if(occ == "student"):
  occu = 1
elif(occ == "employee"):
  occu = 2
else:
  occu = 3
```

```
import json

f = open('/content/drive/MyDrive/AI/Ass5/sort_data.json')
data = json.load(f)


print("Since you have chosen " + typ + ", here are the categories for the items(choose the number and type the number only)"
#get categories

if  typ == "electronics":
  typind = 0
  typ = "electronics"
elif typ == "furniture":
  typind = 1
  typ = "furniture"
else:
  typind = 2
  typ = "household_items"

i =0
for item in data[typind]['items']:
  print(str(i) + " " + item['category'])
  i = i+1

cat = int(input())
category = data[typind]['items'][cat]['category']
category = category.lower()
cate = ""
for i in category:
  if i == " ":
    cate = cate + "_"
  elif i == "&":
    cate += "and"
  else:
    cate += i
```

```
#get subcategories
print("Since you have chosen " + category + ", here are the subcategories for the items")
i = 0
for item in data[typind]['items'][cat]['items']:
  print(str(i) + " " + item['subCategory'])
  i = i+1


print("Choose the sub category from the chosen category (choose the number and type the number only)")
subcat = int(input())

subCategory = data[typind]['items'][cat]['items'][subcat]['subCategory']

subCategory = subCategory.lower()
sucate = ""
for i in subCategory:
  if i == " ":
    sucate = sucate + "_"
  elif i == "&":
    sucate += "and"
  else:
    sucate += i



print("You have chosen the " + subCategory + " of " + category + " category")


rating = 0
highest_rated = {}
for item in data[typind]['items'][cat]['items'][subcat]['items']:
  if(item['Rating'] >= rating):
    highest_rated = item

print("The highest rated product in the category is: \n" + highest_rated['Name'] + " with the rating of " + str(highest_rate


if(choi == 1):
  print("You have chosen not to use the auto set budget so choose your budget limits.")
  print("Your budget lower limit (Give only the number)")
  lower = input()
  print("Your budget upper limit (Give only the number)")
  upper = input()
else:
  print("we are using the auto set budget for you")
```

```
Since you have chosen household, here are the categories for the items(choose the number and type the number only)
0 Furnishings
1 Kitchen and Dining
2 Home Decor
3 Tools and utility
4 Lighting and Electricals
5 Cleaning and Bath
6 Pet and Gardening
4
Since you have chosen lighting and electricals, here are the subcategories for the items
0 Bulbs
1 Emergency lights
2 Torches
3 Tube lights
4 Extension cords
5 Batteries
Choose the sub category from the chosen category (choose the number and type the number only)
2
You have chosen the torches of lighting and electricals category
The highest rated product in the category is:
Pigeon 14787 Torch with the rating of 3.03 and a price of ₹429
we are using the auto set budget for you
```

```
ans = '"' + (typ + "(" + cate + ", " + sucate + "," +  str(occu) + "," + str(choi) + "," + str(lower) + "," + str(upper) + "
```

```
import subprocess
x = 'echo ' + ans + ' | swipl -q -f /content/drive/MyDrive/AI/Ass5/shopping.pl'
print(subprocess.getoutput(x))
```

```
 Total Ratings : 1310

Brand : JY
 Name and descripton : JY SUPER jy-8990 Torch
 Price(in rupees) : 234
 Rating(Out of 5) : 4.36
 Total Ratings : 1981

Brand : MZ
 Name and descripton : MZ Mini Rechargeable Pocket Light Zoom COB USB Charging Led Water Proof DP Torch
 Price(in rupees) : 119
 Rating(Out of 5) : 3.94
 Total Ratings : 206

Brand : Syska
 Name and descripton : Syska SSK-T112ML Torch
 Price(in rupees) : 199
 Rating(Out of 5) : 3.77
 Total Ratings : 661

Brand : STARDEEP
 Name and descripton : STARDEEP PL 006 PLUS WITH CHARGER SUPREME LITHIUM 3W Torch
 Price(in rupees) : 215
 Rating(Out of 5) : 3.75
 Total Ratings : 644

Brand : Pigeon
 Name and descripton : Pigeon 14809 Torch
 Price(in rupees) : 79
 Rating(Out of 5) : 3.49
 Total Ratings : 1246

Brand : NH
 Name and descripton : NH WORLD Mini 2 in1 Waterproof Chargeable LED 4 Mode Zoomable Full Metal Body 9W Flashlight Torch
 Price(in rupees) : 172
 Rating(Out of 5) : 3.46
 Total Ratings : 1637

Brand : HAVELLS
 Name and descripton : HAVELLS Ranger10 Torch
 Price(in rupees) : 175
 Rating(Out of 5) : 3.42
 Total Ratings : 289

Brand : EVEREADY
 Name and descripton : EVEREADY DL50 Torch
 Price(in rupees) : 87
 Rating(Out of 5) : 3.24
 Total Ratings : 798


THANKYOU FOR USING JCT RECOMMENDATION SYSTEM
true
ERROR: Type error: `character_code' expected, found `-1' (an integer)
ERROR: In:
ERROR:   [11] char_code(_5442,-1)
ERROR:   [10] '$in_reply'(-1,'?h') at /usr/lib/swi-prolog/boot/init.pl:804
```