**Code:**

**#cart.py**

import cv2

from prettytable import PrettyTable

import speech\_recognition as sr

from gtts import gTTS

import os

import pygame

import time

from product import product\_db

def speak(text):

print(f"Speaking: {text}")

tts = gTTS(text=text, lang='en')

tts.save("output.mp3")

pygame.mixer.init()

pygame.mixer.music.load("output.mp3")

pygame.mixer.music.play()

while pygame.mixer.music.get\_busy():

time.sleep(0.5)

pygame.mixer.music.unload()

os.remove("output.mp3")

# Cart to hold items

cart = []

def scan\_qr\_code(frame):

detector = cv2.QRCodeDetector()

data, bbox, \_ = detector.detectAndDecode(frame)

if bbox is not None:

print("QR Code detected")

if data:

prod = product\_db.get(data)

return prod

else:

print("No data found in QR Code")

else:

print("No QR Code detected")

return None

def add\_to\_cart(product):

"""

Adds a product to the cart.

"""

global cart # Declare that we're using the global cart variable

cart.append(product)

command = f"Added {product['name']} to cart. Price: Rs.{product['price']:.2f}"

print(command)

speak(command)

def display\_cart():

if not cart:

print("Your cart is empty.")

return 0, "", ""

table = PrettyTable()

table.field\_names = ["No.", "Product Name", "Price"]

total\_price = 0

for idx, item in enumerate(cart, start=1):

table.add\_row([idx, item['name'], f"Rs.{item['price']:.2f}"])

total\_price += item['price']

print("\nCart Summary:")

print(table)

total = f"\nYour total is: Rs.{total\_price:.2f}\n"

speak(total)

try:

with open("purchase.txt", "w") as f:

f.write("Cart Summary:\n")

f.write(str(table) + "\n")

f.write(total + "\n")

except Exception as e:

print(f"Error writing to purchase.txt: {e}")

return total\_price, str(table), total

def process\_payment(payment\_option, total\_price):

if payment\_option == '1':

print("Processing Credit Card Payment...")

card\_number = input("Enter your credit card number: ").strip()

card\_expiry = input("Enter card expiry date (MM/YY): ").strip()

card\_cvc = input("Enter card CVC: ").strip()

print(f"Processing payment of Rs.{total\_price:.2f}...")

return "Payment successful! Thank you for using your credit card."

elif payment\_option == '2':

print("Processing Debit Card Payment...")

card\_number = input("Enter your debit card number: ").strip()

card\_expiry = input("Enter card expiry date (MM/YY): ").strip()

card\_cvc = input("Enter card CVC: ").strip()

print(f"Processing payment of Rs.{total\_price:.2f}...")

return "Payment successful! Thank you for using your debit card."

elif payment\_option == '3':

print("Processing Cash Payment...")

amount\_paid = float(input("Enter the amount you are paying with: Rs.").strip())

change = amount\_paid - total\_price

print(f"Payment successful! Your change is: Rs.{change:.2f}")

return f"Payment successful! Your change is: Rs.{change:.2f}"

else:

print("Invalid payment option selected.")

return "Invalid payment option selected."

def write\_receipt\_to\_file(name,table\_str, total, payment\_message):

"""

Writes the cart summary, total, and payment message to a file.

"""

try:

file\_path = "purchase.txt"

print("Saving receipt to:", os.path.abspath(file\_path))

with open(file\_path, "w") as f:

f.write("Walmart Go:\n")

f.write(f"Name :{name}\n")

f.write("Cart Summary:\n")

f.write(table\_str + "\n")

f.write(total + "\n")

f.write(payment\_message + "\n")

print("Receipt written to purchase.txt")

except Exception as e:

print(f"Error writing to purchase.txt: {e}")

def main():

# Initial greeting

speak("Hello! Welcome to Walmart Go.")

# Ask for the user's name

speak("What is your name?")

# Recognize speech input for the user's name

r = sr.Recognizer()

with sr.Microphone() as source:

audio = r.listen(source, timeout=5, phrase\_time\_limit=5)

try:

name = r.recognize\_google(audio)

speak(f"Hello, {name}! Let's start shopping!")

except sr.UnknownValueError:

speak("Sorry, I didn't catch that. Let's call you Shopper. Let's start shopping!")

name = "Shopper"

except sr.RequestError:

print("Sorry, I'm having trouble recognizing speech right now.")

return

# Start shopping

speak("Please scan your QR code here.")

cap = cv2.VideoCapture(0) # Open camera

if not cap.isOpened():

print("Error: Camera not accessible.")

return

while True:

ret, frame = cap.read()

if not ret:

print("Failed to grab frame")

break

cv2.imshow("QR Code Scanner", frame)

product = scan\_qr\_code(frame)

if product:

add\_to\_cart(product)

cv2.waitKey(2000) # Wait for 2 seconds to prevent multiple reads of the same QR code

if cv2.waitKey(1) & 0xFF == ord('q'):

break

cap.release()

cv2.destroyAllWindows()

total\_price, table\_str, total = display\_cart()

if total\_price > 0:

speak("Proceeding to payment.")

print("Payment Options:")

print("1. Credit Card")

print("2. Debit Card")

print("3. Cash")

payment\_option = input("Select payment method (1/2/3): ").strip()

if payment\_option in ['1', '2', '3']:

payment\_message = process\_payment(payment\_option, total\_price)

# Write the cart summary, total, and payment message to the file

write\_receipt\_to\_file(name,table\_str, total, payment\_message)

else:

print("Invalid payment option selected.")

else:

print("No items in the cart. No payment needed.")

if \_\_name\_\_ == "\_\_main\_\_":

main()