1. Hospital Emergency Room Triage

A hospital uses the following triage system for patients:
If the patient's temperature is above 102°F or they report severe pain, classify them as "High Priority."
If the temperature is between 99°F and 102°F or they report moderate pain, classify them as "Medium Priority."
Otherwise, classify them as "Low Priority."
Take the patient's temperature and pain level ("none," "moderate," or "severe") as input, and display their priority.

```
#Variable

patient_temp = eval(input("Enter your temprature")) #patient will
enter temprature in Fahrenheit

pain_level = str(input("none, moderate or severe")) #patient will
enter the pain level

#conditions
if patient_temp>102 and pain_level == "severe": #patient will have
high priority in these cases
    print("High Priority")
    if 99>patient_temp>102 and pain_level == "moderate": #patient will
have medium priority in these cases
        print("Medium Priority")
else:
    print("Low Priority") #patient will have low priority in these
cases
```

```
Enter your temprature 100
none, moderate or severe moderate

Low Priority
```

2. Shopping Cart Free Delivery

A store provides free delivery under the following conditions:
If the total cart value exceeds ₹2000.
If the total cart value is between ₹1000 and ₹2000 but the user has a membership. Otherwise, the delivery fee is ₹100.
Take the cart value and membership status ("yes" or "no") as input, and determine if the delivery is free or chargeable.

```
#Variable

cart_value = int(input("Enter your total cart value: ")) #customer
```

```
enter the total cart value
mem_status = str.lower(input("Yes or No: "))             #customer
enter the membership status as yes or no

if cart_value > 2000:
    print("Congratulations! You received free delivery on this
order.") #customer recieved free delivery on this order as the amount
is above 2000 rupees
elif 1000 < cart_value < 2000 & mem_status == "yes":
    print("Congratulations! You received free delivery on this order")
#customer recieved free delivery as they have an active membership
else:
    print("Your delivery charge is 100 on this order.") #delivery
charged was implied
```

```
Enter your total cart value:  3000
Yes or No:  no

Congratulations! You received free delivery on this order.
```

3. Library Fine System

A library charges a fine for overdue books as follows:
Up to 5 days overdue: ₹2 per day.
6–10 days overdue: ₹5 per day.
More than 10 days overdue: ₹10 per day.
Take the number of overdue days as input and calculate the fine.

```
#Variable

overdue_days = int(input("Enter your overdue days: "))
final_price = overdue_days * 2  #price upto 5 days
final_price2 = overdue_days * 5  #price within 6-10 days
final_price3 = overdue_days * 10  #price more than 10 days

if overdue_days <= 5:
    print(final_price)  #final price within 5 days
    if 6 < overdue_days < 10:
        print(final_price2)  #final price within 6-10 days
else:
    print(final_price3)  #final price after 10 days
```

```
Enter your overdue days:  15

150
```

4. Airport Luggage Check

Airlines allow the following luggage limits:
Economy Class: Up to 20 kg. Excess luggage is charged ₹200 per kg.
Business Class: Up to 30 kg. Excess luggage is charged ₹150 per kg.
First Class: Up to 40 kg. Excess luggage is charged ₹100 per kg.
Take the class type ("economy," "business," or "first") and the luggage weight as input, and calculate the excess fee if applicable.

```
#variable

flight_class = str.lower(input("economy, business or first"))  #type
of airlines
excess_wt = int(input("Enter your extra luggage weight: "))  #total
access weight

eco_price = excess_wt * 200  #price of economy class
business_price = excess_wt * 150  #price of business class
first_price = excess_wt * 100  #price of first class


if flight_class == "economy":
    print(f"Your total price for your access luggage is {eco_price}.")
#print final price of economy class
elif flight_class == "business":
    print(f"Your total price for your access luggage is
{business_price}.")  #print final price of business class
else:
    print(f"Your total price for your access luggage is
{first_price}.")  #print final price of first class
```

```
economy, business or first first
Enter your extra luggage weight:  7

Your total price for your access luggage is 700.
```

5. Hotel Room Pricing

A hotel offers discounts based on the type of customer and room type:
Regular customers get 10% off on all rooms.
Members get 20% off on deluxe rooms and 15% off on standard rooms.
VIP customers get 30% off on all rooms.
Take customer type ("regular," "member," or "VIP") and room type ("standard" or "deluxe") as input, and calculate the final price after applying the discount.

```
#variable
```

```
customer_type = str(input("regular , member or VIP: "))
room_type = str(input("standard or deluxe"))
room_amt = eval(input("Enter room amount:"))

dis_10 = room_amt - (room_amt * 0.10)
dis_15 = room_amt - (room_amt * 0.15)
dis_20 = room_amt - (room_amt * 0.20)
dis_30 = room_amt - (room_amt * 0.30)

if customer_type == "regular":
    print(f"You have recieved 10% discount on this room so your final
price is {dis_10}.")
elif customer_type == "member" and room_type == "standard":
    print(f"You have recieved 15% discount on this room so your final
price is {dis_15}.")
elif customer_type == "member" and room_type == "deluxe":
    print(f"You have recieved 20% discount on this room so your final
price is {dis_20}.")
else:
    print(f"As you are our VIP customer you have recieved a discount
of  30% on all your rooms so your final price is {dis_30}")
```

```
regular , member or VIP:  VIP
standard or deluxe standard
Enter room amount: 10000

As you are our VIP customer you have recieved a discount of  30% on
all your rooms so your final price is 7000.0
```

6. Energy Consumption Billing

An electricity company charges based on energy consumption as follows:
For consumption up to 100 units, the rate is ₹5 per unit.
For consumption between 101 and 300 units, the rate is ₹10 per unit for additional units. For consumption above 300 units, the rate is ₹15 per unit for additional units. Take the total consumption as input and calculate the total bill.

```
#variable

total_consumption = eval(input("Enter total consumption of energy: "))

if total_consumption <= 100:
    print(f"Your total bill is {total_consumption * 5}.")
elif 101 < total_consumption < 300:
    print(f"Your total bill is {total_consumption * 10}.")
else:
    print(f"Your total bill is {total_consumption * 15}.")
```

```
Enter total consumption of energy:  350

Your total bill is 5250.
```

7. Ride Fare Calculation

A ride-sharing app charges based on the time of day and distance:
Daytime (6 AM to 10 PM): ₹15 per km.
Nighttime (10 PM to 6 AM): ₹20 per km.
If the distance is more than 20 km, apply a 10% discount on the total fare. Take the time ("day" or "night") and distance as input, and calculate the total fare

```python
#Variable
time = str.lower(input("day or night "))
distance = int(input("Enter the total distance:"))

day = distance * 15
night = distance * 20
discounted_fare1 = day - (day * 0.1)
discounted_fare2 = night - (night * 0.1)

#condition1

if distance > 20:
    if time == day:
        print(f"Your fare is {discounted_fare1}")
    else:
        print(f"Your fare is: {day}")

#condition2
elif distance > 20 and time == night:
    print(f"Your fare is {discounted_fare2}")
else:
    print(f"Your fare is: {night}")
```

```
day or night  day
Enter the total distance: 25

Your fare is: 375
```

8. Event Entry Rules

For an event, the following entry rules apply:
Visitors under 12 or above 60 get free entry.
Students (12–25 years) with a valid ID get a 50% discount.

All other visitors must pay full price.
Take the age and student ID status ("yes" or "no") as input, and determine the entry fee.

```
#variable
age_input = int(input("Enter you Age"))
stu_ID = str.lower(input("yes or no"))

if 12 < age_input <= 25  and stu_ID == 'yes':
    print("Congratulations! you have received 50% discount.")
elif age_input < 12 or age_input > 60:
    print("Congratulations! you have free entry.")
else:
    print("You will be charged with full price.")
```

9. Parking Lot Charges

A parking lot charges based on the type of vehicle:
Cars: ₹50 for the first hour, ₹20 for every additional hour.
Bikes: ₹20 for the first hour, ₹10 for every additional hour.
Take the type of vehicle ("car" or "bike") and the parking duration as input, and calculate the parking fee.

```
#variable

type_of_vehicle = str(input("Bike or Car:"))
parking_duration = int(input("Enter parking duration in hours:"))
charge_for_bike = 20
final_charge_bike = charge_for_bike + (parking_duration * 10)
charge_for_cars = 50
final_charge_cars = charge_for_cars + (parking_duration * 20)


#condition1
if type_of_vehicle == "Bike":
    if parking_duration == 1:
        print(f"Parking charge is {charge_for_bike}")
    else:
        print(f"Parking charge is {final_charge_bike}")

#condition2
elif type_of_vehicle == "Car" and parking_duration == 1:
    print(f"Parking charge is {charge_for_cars}")
else:
    print(f"Parking charge is {final_charge_cars}")
```

10. Real Estate Loan Eligibility

A bank offers real estate loans based on the following criteria:
If the applicant earns more than ₹1,00,000 per month and has no existing loans, they are eligible for a 90% loan-to-value (LTV) ratio.
If the applicant earns between ₹50,000 and ₹1,00,000, or has existing loans, they are eligible for a 70% LTV ratio.
Otherwise, they are eligible for a 50% LTV ratio.
Take the monthly income and loan status ("yes" or "no") as input, and display the eligible LTV ratio.

```
#variable
income = int(input("Enter your Earning amount per month:"))
loan_status = str.lower((input("Active Loan (yes/no):")))

#condition1
if income >= 100000 and loan_status == "no":
    print("Congratulations! you are eligible for 90% LTV")
elif 50000 < income <100000 and loan_status == "yes":
    print("Congratulations! you are eligible for 70% LTV")
else:
    print("You are eligible for 50% LTV")
```