# Practical 1 :-

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**Problem Statement:** Imagine you are developing a finance application that calculates compound interest for investments. Your task is to create a Python program that takes user input for the principal amount, interest rate, and period and then computes the compound interest using the provided numeric data types. Ensure the program handles various scenarios such as interest rates and periods accurately.

In [1]:
```python
# taking user inputs
principal = float(input("Enter the principal amount: "))
interest_rate = float(input("Enter the interest rate: "))
time_period = float(input("Enter the time period in years: "))

# calculating compound interest and final amount
final_amount = principal * (1 + (interest_rate / 100)) ** time_period
compound_interest = final_amount - principal

print("Compound Interest = Rs. %.2f" % compound_interest)
print("Final Amount = Rs. %.2f" % final_amount)
```

```
Compound Interest = Rs. 435.63
Final Amount = Rs. 1435.63
```

**Problem Statement:** You are tasked with building an email automation system for a marketing campaign. Your program must generate personalized email messages for customers based on their names and recent purchases. Develop a Python script that utilizes string operations to construct dynamic email templates by inserting customer names and product details into predefined message formats.

In [2]:
```python
customer_name = str(input("Enter customer name: "))
product_name = str(input("Enter product name: "))

customer_email = customer_name.replace(" ", "").lower() + ".51" + "@gmail.com"

# printing the personalized email message
print("\nTo:", customer_email)
print("Dear " + customer_name + ",")
print("\tThank you for your recent purchase of \'" + product_name + "\' from our
print("We are up for any feedbacks or suggestions from your end! Please drop the
print("\nThank your for shopping with SanZone!")
print("Best regards,")
print("SanZone Pvt. Ltd.")
```

To: sarthaksanay.51@gmail.com
Dear Sarthak Sanay,
        Thank you for your recent purchase of 'Sony A7 Camera' from our store! Yo
ur order is confirmed and will be shipped shortly within the next 3 days.
We are up for any feedbacks or suggestions from your end! Please drop them at our
support mail if needed. You can also shop for more items at our website during th
e Great Indian Festival Sale live right now which is offering huge discounts on t
ech products.

Thank your for shopping with SanZone!
Best regards,
SanZone Pvt. Ltd.

**Problem Statement: You are a cashier at a grocery store. Customers come to your counter with different items. Each item has a specific price (float). You must add up all the prices (float) to get the total bill (float). Write a Python program to calculate the total bill.**

In [3]:
```python
customer_name = str(input("Enter customer's name: "))

print("\n   RRU GROCERY STORE BILL :-\n")
print("Customer Name: ", customer_name)
print("-" * 30)
print("Item\t\tPrice")
print("Apples 1kg\tRs. 159.50")
print("Milk 1ltr\tRs. 66.45")
print("Brown Bread\tRs. 75.55")
print("Wheat Flour\tRs. 247.60")
print("Carrots 1kg\tRs. 65.50")

total_bill = float((159.50 + 66.45 + 75.55 + 247.60 + 65.50))

print("-" * 30)
print("Total Bill = Rs. %.2f" % total_bill)
print("-" * 30)
```

```
   RRU GROCERY STORE BILL :-

Customer Name:  Sarthak Sanay
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Item           Price
Apples 1kg     Rs. 159.50
Milk 1ltr      Rs. 66.45
Brown Bread    Rs. 75.55
Wheat Flour    Rs. 247.60
Carrots 1kg    Rs. 65.50
------------------------------
Total Bill = Rs. 614.60
------------------------------
```