SEQUENCE STRUCTURE

1. Draw a flowchart and write a program to Add two numbers given by the user
2. Draw a flowchart and write a program to calculate the area of a Rectangle
3. Draw a flowchart and write a program to calculate the area of a Circle
4. Draw a flowchart and write a program to calculate the area and perimeter of a Rectangle
5. Draw a flowchart and write a program to find the total and average of a student who has appeared for three subjects
6. Draw a flowchart and write a program to calculate the total resistance of a circuit if the two resistors are connected in series and connected in parallel
7. Draw a flowchart and write a program to find the third angle of a triangle if the two angles is given by the user
8. Draw a flowchart and write a program to convert meter to centimeter
9. Draw a flowchart and write a program to convert hour into minutes and seconds
10. Draw a flowchart and write a program to convert kilometer to yards
11. Draw a flowchart and write a program to convert centigrade temperature to farenhite temperature
12. Draw a flowchart and write a program to convert yards to meter and kilometer
13. Draw a flowchart and write a program to find the height of the ladder if the height of the wall and the angle of elevation is given by the user
14. Draw a flowchart and write a program to find the height of the wall if the height of the ladder and the inclination of the ladder from the ground is given by the user
15. Draw a flowchart and write a program , A dress takes 3 metes of cloth. Find the number of dresses can be made for N meters of Cloth
16. Draw a flowchart and write a program, A door takes 18 square feet of wood. Find out how many doors can be made from N square feet of wood
17. Draw a flowchart and write a program to convert seconds into Hour, Minute, Seconds
18. Draw a flowchart and write a program to convert centimeter to meter and Centimeter
19. Draw a flowchart and write a program, A shopkeeper gives one cap for every 12 bottles of cold drinks and a key ring for every 5 bottles of cold drinks. Find the number of caps and key rings received by a person for the purchase of N bottles of Cold drinks
20. Draw a flowchart and write a program, A person goes to Bank to withdraw certain amount of money. If the bank gives the change in Rs 5 and Re 1 find out how many 5 Rs note and how many 1 Re note the person receives
21. Draw a flowchart and write a program to find the different types of notes the person receives for any amount the person wants to withdraw
    Rs 100
    Rs 50
    Rs 20
    Rs 10
    Rs 5
    Rs 2
    Re 1

SELECTION STRUCTURE

1. Draw a flowchart and write a program to check whether the person is eligible to vote or not
2. Draw a flowchart and write a program to check whether the person is rich or poor on his salary. If the salary is less than or equal to 10000 consider him poor else rich
3. Draw a flowchart and write a program to check whether the person will get commission on no commission on his Sales. If sales is greater than 50000 he will get commission else no commission.
4. Draw a flowchart and write a program to check whether a person is eligible to vote or not. If the person is not eligible to vote find out how many years he has to wait
5. Draw a flowchart and write a program to check whether the student has passed or failed on his marks. If the total is greater than or equal to 180 consider him Pass else Fail. The student appears for three subjects and his marks were recorded individually
6. Draw a flowchart and write a program to check whether the number is odd or even
7. Draw a flowchart and write a program to check whether the number is divisible by 5 or not
8. Draw a flowchart and write a program to check whether a year is a leap year or not
9. Draw a flowchart and write a program to check whether a number is odd or even. If the number is odd check whether the number is divisible by 7 or not
10. Draw a flowchart and write a program to check whether the person has made profit or loss or no profit no loss if the cost price and selling price is entered by the user
11. Draw a flowchart and write a program, Two persons are playing a game of Dice find out whether A has

won the match or B has won the match or Game Drawn

12. Draw a flowchart and write a program to check whether the person has to retire or continue on the following conditions. If either the age is greater than 55 or his salary is greater than 15000 he has to retire else continue
13. Draw a flowchart and write a program to check whether the person will be insured or not on the following conditions. If either his salary greater than 10000 or his age is greater than 30 he has to retire else continue
14. Draw a flowchart and write a program to find out whether the person is below weight, normal weight or above weight if his weight is taken from the user. If the weight is less than 40 consider it as below weight, If it is more than 80 consider it as over weight, if the weight is between 40 to 80 both inclusive consider it as normal weight
15. Draw a flowchart and write a program to find out whether the day is cold day, normal day, or hot day if the temperature is taken from the user. If the temperature is less than 20 consider it as cold day, If it is more than 40 consider it as hot day, if the weight is between 20 to 40 both inclusive consider it as normal day
16. Draw a flowchart and write a program to find out whether the student has passed in first division, second division, third division or fail on his average. If the average is greater than or equal to 60 consider it as first division, if the average is greater than or equal to 45 consider it as second division, if the average is greater than or equal to 30 consider it as third division. If the average is less than 30 or any subject mark is less than 30 consider it as fail
17. Draw a flowchart and write a program to find out the greatest angle of the triangle if the angles is given by the user
18. Draw a flowchart and write a program to find out whether the year is a leap year or not. If the year is not a century year and the year is totally divisible by 4 it is a leap year but if the year is a century year then it should be properly divisible by 400 and not by 100
19. Draw a flowchart and write a program to find the bill for the telephone. The telephone charges Rs. 275 from all households and allows 100 units free. If the unit exceeds 100 Rs. 2.00 is charged for extra unit above 100 along with Rs. 275
20. Draw a flowchart and write a program to find the travelling allowance for a employee. The company gives the traveling allowance on the following table

Distance	Amount
<=20	Rs. 200
>20 & <=50	Rs 200 + Rs 3 per extra kilometer above 20
>50 & <=100	Rs 500 + Rs 3 per extra kilometer above 50
>100	Rs 10 per kilometer

21. Draw a flowchart and write a program to find the hotel bill for a customer who stays in the hotel for n number of days. The charge is as follows

Type	Charge	Tax
1	Rs 800	----
2	Rs 1000	10%
3	Rs 1200	10%
4	Rs 2000	20%

22. Draw a flowchart and write a program to find whether a person is child, teen, youth, or old on his age. If his age is less than 14 consider is as child, between 14 to 20 both inclusive teen, between 21 to 45 both inclusive youth and above 45 old
23. Draw a flowchart and write a program to find the car bill for a particular tourist

Type of Car	Distance	Driver	Charge
Maruti	<=100	Rs. 100	Rs 800
	>100 & <=200	Rs. 300	Rs 800+Rs.10/km above 100
	>200	Rs. 500	Rs. 15 per kilometer
Sumo	<=100	Rs. 100	Rs 600
	>100 & <=200	Rs. 300	Rs 600+Rs.8/km above 100
	>200	Rs. 500	Rs. 12 per kilometer

24. Draw a flowchart and write a program to find whether a given number is a negative number, zero, positive number. If the number is positive check whether the number is odd or even. If the number is odd check whether the number is divisible by five or not. Display the suitable message for the given number
25. Draw a flowchart and write a program to enter three sides of a triangle and find out whether it is a equilateral, isosceles, scalene triangle

LOOPING STRUCTURE

1. Draw a flowchart and write a program to generate natural numbers between 1 to 20
2. Draw a flowchart and write a program to generate odd numbers from 21 to 45
3. Draw a flowchart and write a program to generate even numbers from 100 to 80
4. Draw a flowchart and write a program to generate natural numbers upto n

5. Draw a flowchart and write a program to generate multiples of 5 upto n
6. Draw a flowchart and write a program to generate natural numbers between a given range
7. Draw a flowchart and write a program to generate odd numbers between a given range
8. Draw a flowchart and write a program to generate even numbers between a given range
9. Draw a flowchart and write a program to generate n odd numbers starting from 1
10. Draw a flowchart and write a program to sum the natural numbers between 1 to 10
11. Draw a flowchart and write a program to sum the natural numbers between 1 to n
12. Draw a flowchart and write a program to sum the odd numbers between a given range
13. Draw a flowchart and write a program to generate the following series
    - 1, 4, 9, 16, 25, ... 100
    - 1, 8, 27, 64, 125, ...1000
    - 1, 10, 2, 9, 3, 8, 4, 7 10,1
    - 1, 2, 4, 8, 16, ...1024
14. Draw a flowchart and write a program to generate the following series
    - Fibbonacci Series 1, 1, 2, 3, 5, 8 ....., 144
    - 1, 1, 1, 3, 5, 9, ...189
15. Draw a flowchart and write a program to print your name five times
16. Draw a flowchart and write a program to find the sum of the five numbers given by the user
17. Draw a flowchart and write a program to find the average temperature of the week if the daily temperature is entered by the user
18. Draw a flowchart and write a program to find the total and the average of the team if the match was played by 11 players and the runs were recorded individually of all the players played in the match
19. Draw a flowchart and write a program to find the sum of the individual digits of a given number
20. Draw a flowchart and write a program to find the product of the individual digits of a given number
21. Draw a flowchart and write a program to check whether a given number is a Armstrong number or not
22. Draw a flowchart and write a program to reverse a given number
23. Draw a flowchart and write a program to check the given number is prime or not
24. Draw a flowchart and write a program to find the largest number in the set of five numbers
25. Draw a flowchart and write a program to find the highest temperature of the week if the daily temperature is entered by the user
26. Draw a flowchart and write a program to find the highest maximum temperature and the highest minimum temperature of the week if the maximum and minimum daily temperature is entered by the user
27. Draw a flowchart and write a program to find the highest and the lowest temperature of the week if the daily temperature is entered by the user
28. Draw a flowchart and write a program to find the status of the game. Two players are playing a game of dice. Each gets three chances alternatively. After three chance the computer has to display whether A has won the match or B has won the match or Game Drawn
29. Draw a flowchart and write a program to generate all the Armstrong numbers from 1 to 1000
30. Draw a flowchart and write a program to generate all the prime numbers from 1 to 100
31. Draw a flowchart and write a program to find the number of people eligible to vote and not eligible to vote in a colony of five people
32. Draw a flowchart and write a program to find the number of people who has to retire and how many can continue in a company of 10 employees. The condition of retiring is the age should be greater than 50
33. Draw a flowchart and write a program , In a company of 10 people generate a statistical report in the following format

Age Group		Number of People
<=20		xx
>20 and <=30	xx	
>30 and <=40	xx	
>40 and <=50	xx	
>50		xx

34. Draw a flowchart and write a program to find out how many people are under weight, normal weight, above weight in a colony of five people. If the weight is less than 40 it is underweight if it is greater than 80 it is overweight and if it is between 40 to 80 both inclusive it is normal weight
35. Draw a flowchart and write a program to find out how many students have got first division, second division, third division and fail in a class of five students. Each student has appeared for three subjects and his marks were recorded individually. The condition is

Average >=60 First Division
Average >=45 Second Division
Average >=30 Third Division
If any subject marks is less than 30 or the average is less than 30 consider it as fail

36. Draw a flowchart and write a program to generate the following pattern

```
*        1        1
**       12       22
***      123      333
****     1234     4444
*****    12345    55555
```

37. Draw a flowchart and write a program to generate the following series

```
00
01
10
11
```

38. Draw a flowchart and write a program to generate the following series

```
000
001
010
011
100
101
110
111
```

39. Draw a flowchart and write a program to generate the multiplication table of a given number in the following format. If the input number is 2 then the output is

```
2   *   1   =   2
2   *   2   =   4
2   *   3   =   6
:   :   :   :   :
2   *   10  =   20
```

ARRAYS IN JAVA

1. Draw a flowchart and write a program to enter five elements in the array and display the same
2. Draw a flowchart and write a program to enter five elements in the array and display them in the reverse order (LIFO)
3. Draw a flowchart and write a program to enter five elements in the array and display the first and the last element of the array
4. Draw a flowchart and write a program to enter five elements in the array and find the sum of all the elements entered in the array
5. Draw a flowchart and write a program to enter two arrays of five elements each and find the sum of the array such that C[1]=A[1]+B[1]
   C[2]=A[2]+B[2]
   : : :
   C[5]=A[5]+b[5]
6. Draw a flowchart and write a program to enter two arrays of five elements each and find the sum of the array such that C[1]=A[1]+B[5]
   C[2]=A[2]+B[4]
   : : :
   C[5]=A[5]+b[1]
7. Draw a flowchart and write a program to enter an array of five elements and display the positions which contains odd numbers
8. Draw a flowchart and write a program to enter five elements in an array and display all the odd numbers first and then all the even numbers
9. Draw a flowchart and write a program to enter five elements in an array and display the largest element in the array
10. Draw a flowchart and write the program to enter the daily temperature of the week and find the highest temperature of the week
11. Draw a flowchart and write the program to enter the daily temperature of the week and find the highest and the lowest temperature of the week. Also calculate the difference between the highest and the lowest temperature
12. Draw a flowchart and write a program to accept five numbers in an array and sort them in the ascending order
13. Draw a flowchart and write a program to accept five numbers in an array and sort them in the ascending order and find the highest element and the second highest element present in the array
14. Draw a flowchart and write a program to accept five numbers in an array and sort them in the descending order and find the highest element and the lowest element in the array also calculate the difference between the highest element and the lowest element in the array
15. Draw a flowchart and write a program to accept five numbers in an array and enter a search element and check whether the number is present in the array or not
16. Draw a flowchart and write a program to accept the run scored by all the batsman in a cricket match which was played by 11 players. Find the highest score and the lowest score of the innings, also calculate the total and average of the innings and find out how many of them have scored half century and how many of them has scored the century in the innings
17. Draw a flowchart and write a program to accept a 3x3 matrix and display the same in the matrix format
18. Draw a flowchart and write a program to accept a 3x3 matrix and display the smallest and the largest element present in the matrix

19. Draw a flowchart and write a program to accept a 3x3 matrix and count the number of odd elements and the number of even elements present in the matrix
20. Draw a flowchart and write a program to accept a 3x3 matrix and find the sum of all the columns separately and also calculate the sum of all the elements present in the matrix
21. Draw a flowchart and write a program to generate the matrix as given

a)
1 2 3
4 5 6
7 8 9

b)
1 0 0
0 1 0
0 0 1

c)
1 1 1
0 0 0
1 1 1

22. Draw a flowchart and write a program to add two matrixes of 3x3 and store it in the third matrix
23. Draw a flowchart and write a program to transpose a given matrix
24. Draw a flowchart and write a program to generate a mirror matrix if the input is

1 2 3
4 4 2
1 3 4

the output is

3 2 1
2 4 4
4 3 1

25. Draw a flowchart and write a program to generate a mirror matrix if the input is

1 2 3
4 4 2
1 3 4

the output is

1 3 4
4 4 2
1 2 3

FUNCTIONS IN JAVA

PASS BY VALUE

1. Write a program to create a function for squaring a given number
2. Write a program to create a function for cubing a given number
3. Write a program to create a function for adding two integer numbers
4. Write a program to create a function for area of a rectangle
5. Write a program to create a function for finding the sum of the resistance connected in series. The number of resistors is two.
6. Write a program to create a function for squaring a number to solve the following equation

   $S=A^2 + B^2 + 2*A*B$

7. Write a program to create a function for squaring and cubing a number to solve the following equation

   $S=A^3 + B^3 + 2*A^2*B + 2*A*B^2$

PASS BY REFERENCE

1. Write a program to create a function for calculating the area of a circle
2. Write a program to create a function for calculating the simple interest for a given principal, rate and time
3. Write a program to create a function for calculating the compound interest for a given principal , rate and time
4. Write a program to create a function for calculating the value of x to the power of y

1. house rent allowance, and gross

STRINGS IN JAVA

1. Write a program to accept a name and display the same
2. Write a program to accept a name and find the number of characters in the given name
3. Write a program to accept a word and reverse a given word
4. Write a program to accept a word and count the number of 'a' in the given word
5. Write a program to accept a word and count the number of vowels in the given word
6. Write a program to accept a word and find the number of consonant and number of vowels present in the word
7. Write a program to accept a sentence and count the number of words, vowels, consonants present in the sentence
8. Write a program to accept a word and check whether it is palindrome or not
9. Write a program to accept a word and toggle the case of the word
10. Write a program to accept a sentence and find the length of the largest word in the sentence

MANIPULATORS

Accept a Decimal number and convert it to its Hexadecimal Form and Octal Form
Accept a Octal Number and convert it to its Decimal form and hexadecimal form
Accept two octal numbers from the user and sum those two numbers
Accept an number from the user and display the number in the following format i.e.,*****123

CLASS & OBJECTS

1. Display the message "Hi! You are getting the real taste of JAVA". The function which holds the message is
2. Create a class which will contain the variables and three methods accept, calculate and display for find the sum and average of a student who has appeared for three subjects
3. Create a class which will contain the variables and three methods accept, calculate and display for finding the values of sin, cos and tan for a given angle
4. Create a class which will contain the variables and three methods accept, calculate and display for finding the status of the student who has appeared for three subjects and his marks were recorded individually. In the calculation part it should display the total, average and the status. If average is greater than or equal to 40 consider him pass else fail.
5. Create a class which will contain the variables and three methods accept, calculate and display for finding the equivalent resistance for two resistors connected in series and parallel
6. Create a class, which will contain the variables and three methods accept, calculate and display for finding gross salary and net salary of the employee. The user feeds the basic salary, DA is 10% of basic salary, TA is 15% of the basic salary, and HRA is 20% of the basic salary. If the gross exceeds 8000 the tax is 10% of the extra amount above 8000
7. Create a class which will contain the variables and two methods calculate and display for finding the profit and profit percentage of an object if the cost price and the selling price is entered in the main function
8. Create a class which will contain the variables and two methods calculate and display for finding the total, average and status of the student. The student has appeared for three subjects. The status of the student has to be decided using the following table. If average >=60 first division, average>=45 second division, average >=30 third division, average <30 fail. If the student gets less than 30 in any of the subject he is considered as fail
9. Create a class which will contain the variables and two methods accept and display for finding the square and cube of a given number. The calculation of the accepted number is done in the main function
10. Create a class which will contain the variables and two methods accept and display for finding the area and circumference of a circle. The calculation is done in the main function
11. Create a class which will contain the variables and two methods accept and display for finding the area and the perimeter of a square. The calculation is done in the main function.
12. Create a class which will contain the variables and two methods accept and display for finding the series of even numbers upto n
13. Create a class, which will contain the variables and single method for calculation. The acceptance of the variable and the display of the result should be done from main function for calculating the selling price of the item if the profit percentage and the cost price is entered by the user
14. Create a class, which will contain the variables and single method for calculation. The acceptance of the variable and the display of the result should be done from main function for calculating the simple interest for a given principal rate and time
15. Create a class, which will contain the variables and single method for calculation. The acceptance of the variable and the display of the result should be done from main function for calculating the final cost of building the house if the cost of the land, cost of bricks, cost of cement, cost of electrification, cost of interior decoration, cost of piping is accepted from the user
16. Create a class, which will contain the variables and single method for calculation. The acceptance of the variable and the display of the result should be done from main function for calculating the density of the body if the mass and the volume is accepted from the user
17. Create a class, which will contain the variables and single method for calculation. The acceptance of the variable and the display of the result should be done from main function for calculating the kinetic energy of the body if the mass, velocity is accepted from the user
18. Create a class, which will contain the variables and single method for calculation. The acceptance of the

variable and the display of the result should be done from main function for calculating the height of the ladder if the height of the wall and the angle of inclination of the ladder is given by the user

19. Create a class, which will contain the variables and single method for calculation. The disp

20. lay of the result should be done from main function for calculating the average temperature of the week

21. Create a class, which will contain the variables and single method for calculation. The display of the result should be done from main function for calculating the total of a student who has appeared for 10 subjects and his marks were recorded individually

FUNCTION OVERLOADING

1. Create a function-overloading program to calculate the area of a square, rectangle and trapezium. The program should have a menu

Area Calculation Menu

1. Area of Square
2. Area of Rectangle
3. Area of Trapezium

Enter your Choice _____

2. Create a function overloading program to calculate the sum and average of two numbers, three numbers and four numbers. The program should have a menu

Sum and Average of Numbers

1. Two Numbers
2. Three Numbers
3. Four Numbers

Enter your Choice ____

3. Create a function overloading program to calculate the equivalent resistance of the resistor connected in series and parallel for two , three, four resistors. The program should have a menu

Equivalent Resistance

1. Two resistors
2. Three resistors
3. Four resistors

Enter your Choice ____

4. Create a function overloading program to calculate the area of different geometric figures. Use the concept of function overloading where ever necessary

Area of Different Geometric Figures

1.Square
2.Circle
3. Rectangle
4. Trapezium
5. Rhombus

Enter your Choice _____

CONSTRUCTOR

1. Create a constructor which will initialize the values of the variable a= 5 and b=10 and display the values of a and b with a display function

2. Create a constructor, which will initialize the value of gravity as 9.8. The user enters the mass and the height to calculate the potential energy of the body

3. Create a constructor, which will initialize the value of pi as 3.1416. The user enters the radius and the area should be calculated.

4. Create a constructor which will initialize the value of time =6. The user enters the principal and the rate to its computer. Find the simple interest for the given principal and rate

INHERITANCE

1. The base class contains the variables 'a' and 'b' and a function to accept both the variables. The derived class contains a variable 'c' and the functions to add, subtract, multiply and divide those two numbers and display the result

2. The base class contains the variables 'a' and 'b' and a function to accept both the variables. One derived class contains a function to calculate the area of a rectangle and display the result and the other derived class contains a function to calculate the perimeter of the rectangle and display the result

3. The base class contains the variables 'p' and 'r' and a function to accept both the variables. The derived class contains the variable t and a function to calculate the simple interest and display the result. There should be four derived classes for calculating for 1 year, 2 year, 3 year and 4 years

4. The base class contains a variable 'r' and a function to accept the radius from the user. The other base class contains a variable 'h' and a function to accept the height from the user. The derived contains a variable 'v' and a function to calculate the volume of the cylinder and display the result

5. The base class contains the marks of english, maths and hindi. The other base class contains the marks of physics, chemistry, biology. The derived class contains a function which can add all the numbers and find the total, average and the status of the student. The status of the student can be calculated using the following table

marks	status
>=60	first division
>=45	second division
>=30	third division

if a student gets less than 30 in any subject he is considered as fail

FILE HANDLING IN JAVA

Try this Examples in the Text Mode as well as Binary Mode

1. Write a program to create a file and add a record. The structure of the file is Empno, Name, Department, Designation and salary
2. Write a program to create a file and add a record. The structure of the file is Accountno, name, type of account, amount.
3. Write a program to add a record to the file in question 2 only if the amount is greater than equal to 100
4. Write a program to create a file and add a record. The structure of the table is itemno, name, unitcost, reorderlevel, reorderquantity and stock
5. Write a program to add a record to the file in question 4
6. Write a program to display all the records from the file in question 4
7. Write a program to display all the records from the file in question 1
8. Write a program to display all the records from the file in question 4 whose stock is less than 10
9. Write a program to display all the records from the file in question 1 whose department is either computer or production
10. Write a program to display all the records from the file in question 1 whose department is given by the user
11. Write a program to display all the records from the file in question 1 whose department and designation is given by the user 3.
12. Write a program to display the record from the file in question 2 whose account number is given by the user
13. Write a program to transfer all the records from the file in question 2 to another file adding the interest to the amount. The interest amount is .5% of the amount
14. Write a program to transfer all the records from the file in question 1 to another file changing the department to "information" whose department is "computer"
15. Write a program to delete a record depending on the emp no from the file in question 1
16. Write a program to delete a record depending on the account no from the file in question 2
17. Write a program to modify a record depending on the emp no from the file in question 1
18. Write a program to modify a record depending on the account no from the file in question 2
19. Write a program for a menu driven program

Main Menu

1. Create a File and add a Record
2. Add a record in the Existing File
3. Modifying a Record
4. Deleting a Record
5. Total Report of the Friends
6. Individual Report of the Friends
7. Report of all the Friends on City

Enter your Choice _____

The structure of file is Serial no, Name, Age, Address, City, Phone

20. Write a program for a menu driven program

Main Menu

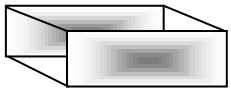
1. Create a File and add a Record
2. Add a record in the Existing File
   Modifying a Record
4. Deleting a Record
5. Total Report of the Employees
6. Individual Report of the Employee on Employee no
7. Report of all the Employee on a particular Department

Enter your Choice _____

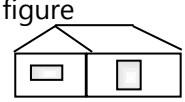
The structure of file is Employee number, name , department, designation, dateofjoin, Salary

GRAPHICS IN JAVA

1. Draw a line from 100,100 – 800,800
2. Draw a circle with radius of 100 in the quadrant 400,400
3. Draw concentric circles in the quadrant 400,400
4. Draw the figure



5. Draw the figure



6.

Linked List in JAVA

Main Menu

1. Create a Node
2. Add a node at the Beginning
3. Add a node at The End
4. Add a node in the Middle
5. Sort the link list
6. Search in Link list
7. Delete a node from the beginning
8. Delete a node from the middle
9. Delete a node from the End
10. Display the nodes
11. Modify a node in the Link list

Enter your Choice ____

The structure of a node is account number, name, amount