

10 SAMPLES OF ALGORITHMS

Example 1: Calculate the Interest of a Bank Deposit

Algorithm:

- Step 1: Read amount,
- Step 2: Read years,
- Step 3: Read rate,
- Step 4: Calculate the interest with formula "Interest=Amount*Years*Rate/100"
- Step 5: Print interest.

- **Example 2: Determine and Output Whether Number N is Even or Odd**

Algorithm:

- Step 1: Read number N,
- Step 2: Set remainder as N modulo 2,
- Step 3: If remainder is equal to 0 then number N is even, else number N is odd,
- Step 4: Print output.

Example 3: Determine Whether a Temperature is Below or Above the Freezing Point

Algorithm:

- Step 1: Input temperature,
- Step 2: If it is less than 32, then print "below freezing point", otherwise print "above freezing point"

Example 4: Determine Whether A Student Passed the Exam or Not:

Algorithm:

- Step 1: Input grades of 4 courses M1, M2, M3 and M4,
- Step 2: Calculate the average grade with formula "Grade=(M1+M2+M3+M4)/4"
- Step 3: If the average grade is less than 60, print "FAIL", else print "PASS".

Example 5: How to get ready in the morning

Algorithm:

- Step 1: wake up
- Step 1.1: did you wake up? yes or no
- Step 2: If you wake up, take a bath and get ready.
- Step 3: If you didn't wake up, repeat step 1
- Step 4: After getting ready, prepare your things and leave the house.
- Step 5: Lock your door.

Example 6: Convert Temperature from Fahrenheit (F) to Celsius (°C)

Algorithm:

- Step 1: Read temperature in Fahrenheit,
- Step 2: Calculate temperature with formula $C = \frac{5}{9} * (F - 32)$,
- Step 3: Print C.

Example 7: Addition of two numbers

Algorithm:

- Step 1: Start
- Step 2: Get two numbers as input and store in a variable as a and b
- Step 3: Add the number a & b and store in variable c
- Step 4: Print c
- Step 5: Stop.

Example 8: Calling a friend on the telephone

Algorithm:

- Step 1: Pick up the phone and listen for a dial tone
- Step 2: Press each digit of the phone number on the phone
- Step 3: If busy, hang up phone, wait 5 minutes, jump to step 2
- Step 4: If no one answers, leave a message then hang up
- Step 5: If no answering machine, hang up and wait 2 hours, then jump to step 2
- Step 6: Talk to friend
- Step 7: Hang up phone

Example 9: If we would like to calculate the factorial of a number

Algorithm

- Step 1: Start
- Step 2: Declare the variables n, factorial and i
- Step 3: Initialize the variables i.e. factorial=1 and i=1
- Step 4: Read values of n
- Step 5: Repeat the steps until n iterations factorial <- factorial * i i <- i+1
- Step 6: Display factorial
- Step 7: Stop

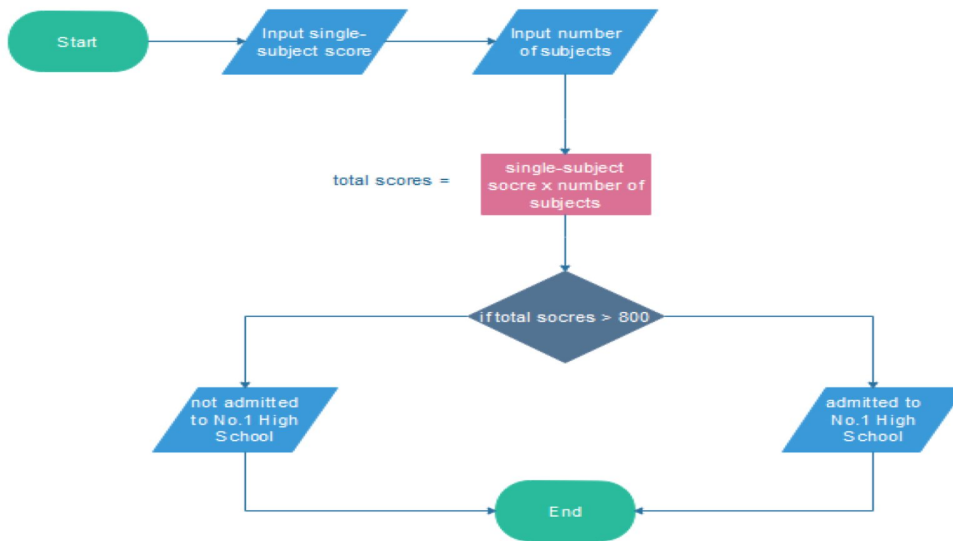
Example 10: Find the biggest among 2 number

Algorithm:

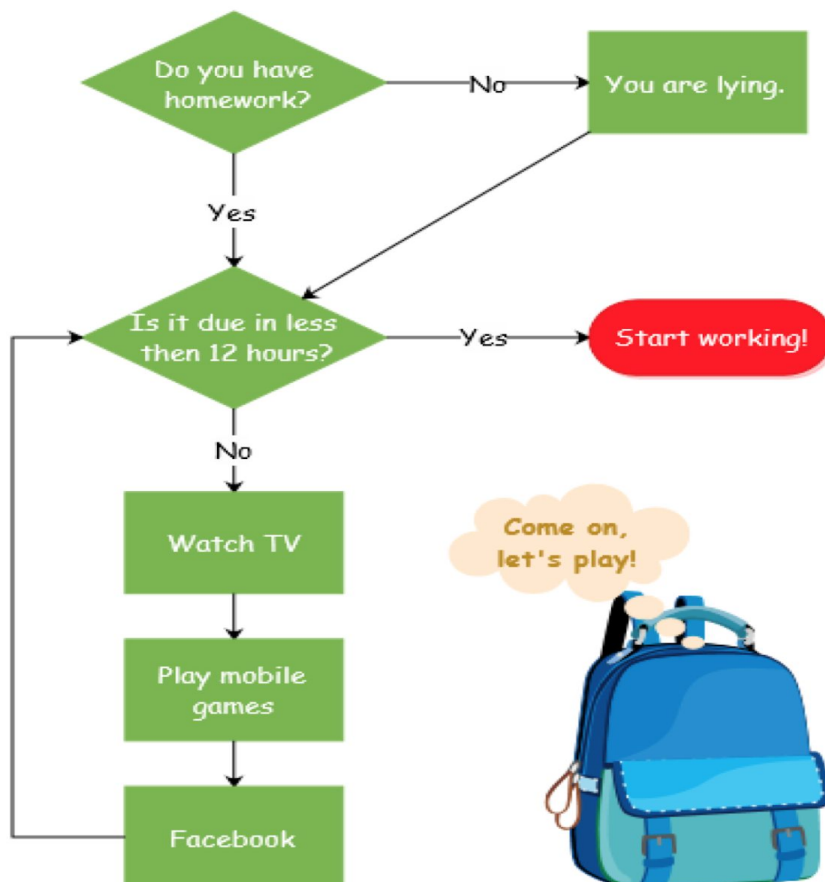
- Step1: Start
- Step 2: Get two numbers as input and store in a variable as a and b
- Step 3: If a is greater than b then
- Step 4: Print a is big
- Step 5: else
- Step 6: Print b is big
- Step 7: Stop

10 EXAMPLES OF FLOWCHART

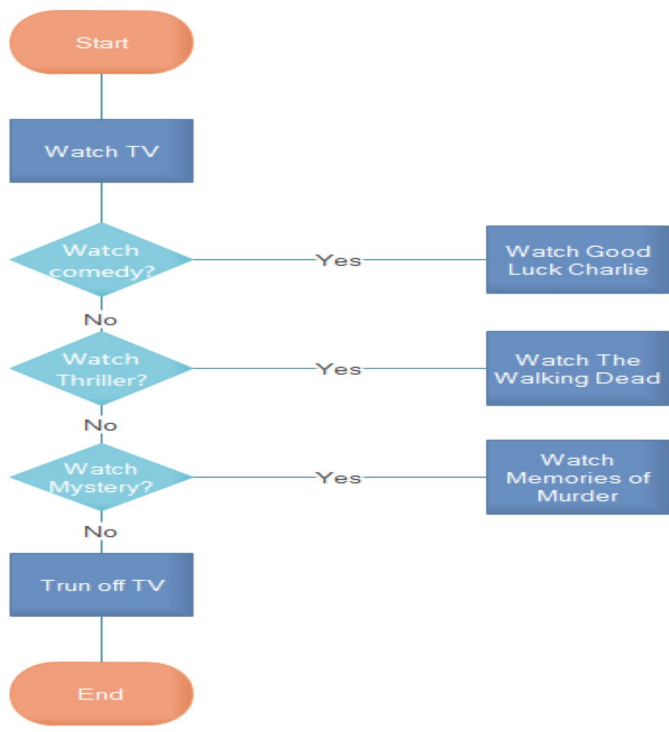
1. ADMITTED TO NO. 1 HIGHSCHOOL



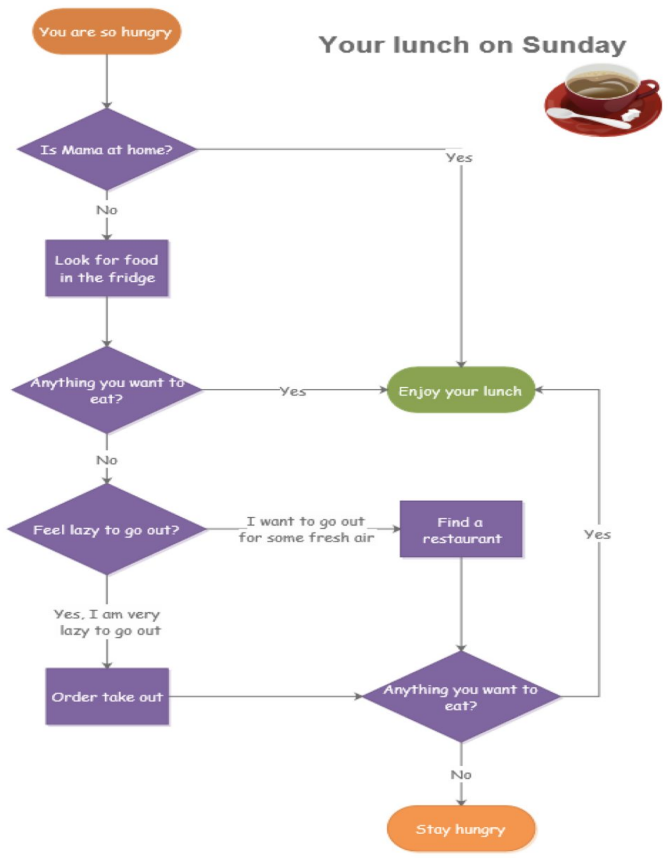
2. Homework Flowchart



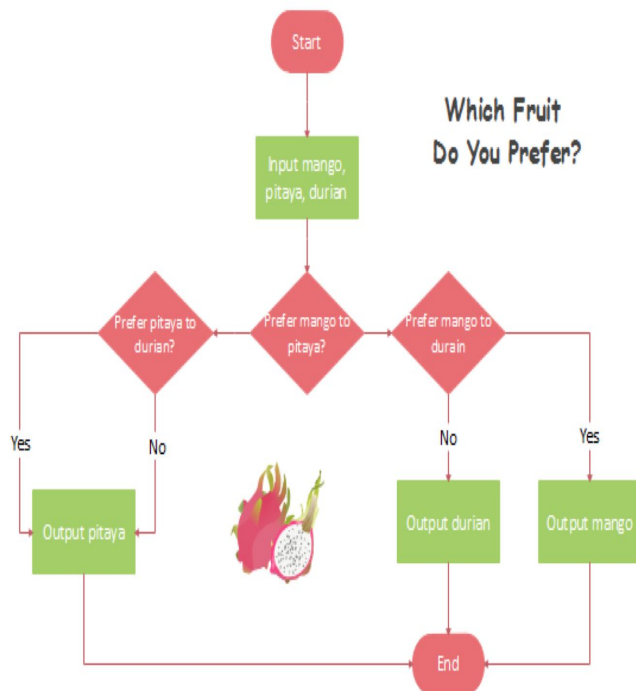
3. Do you want to watch TV flowchart



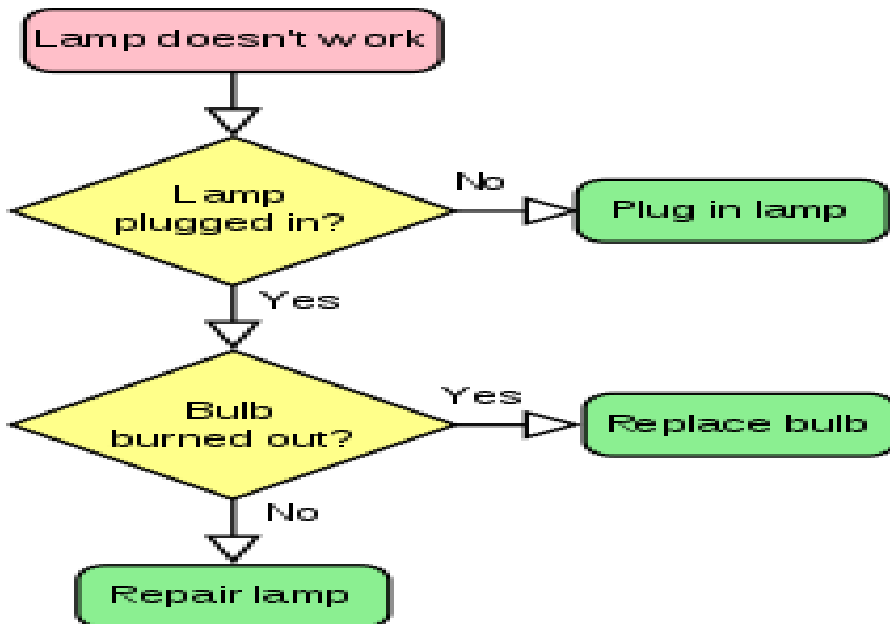
4. Your Lunch on Sunday flowchart



5. Which Fruit do you prefer flowchart

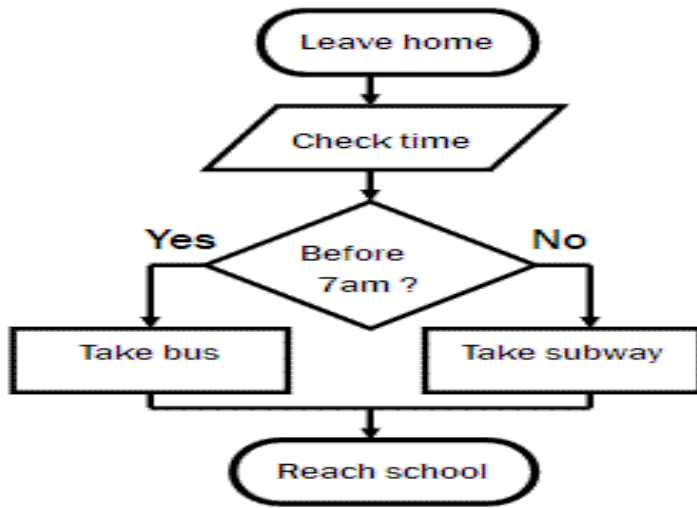


6. How to fix a broken lamp



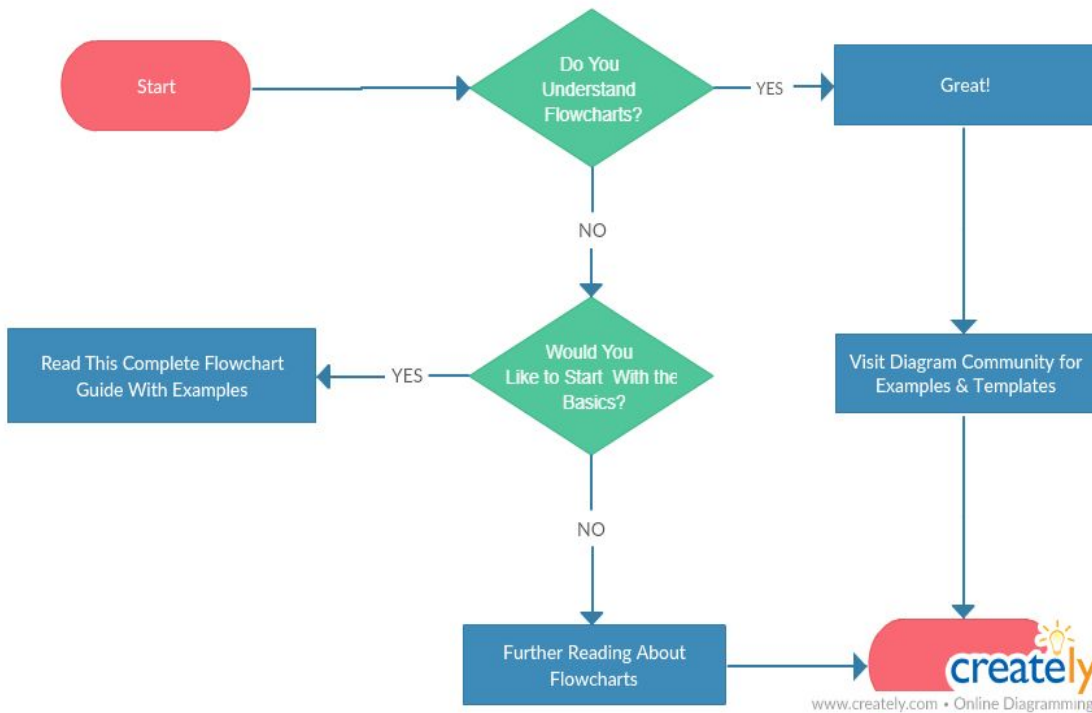
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7. Going to school riding the bus or subway

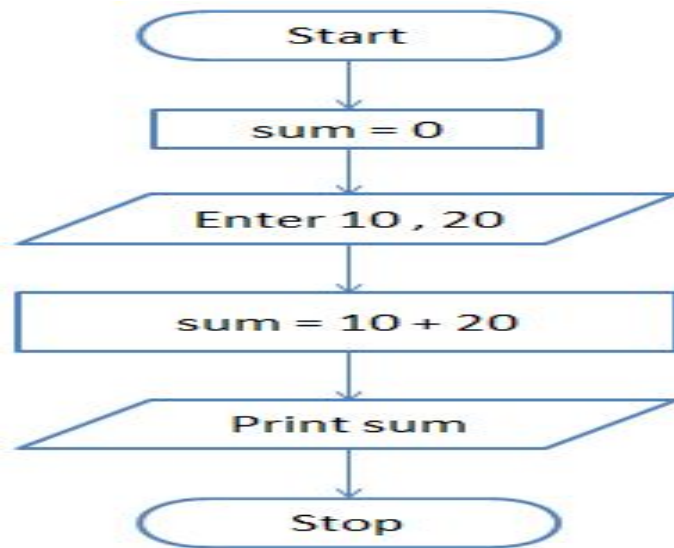


8. Flow chart on understanding Flow Charts

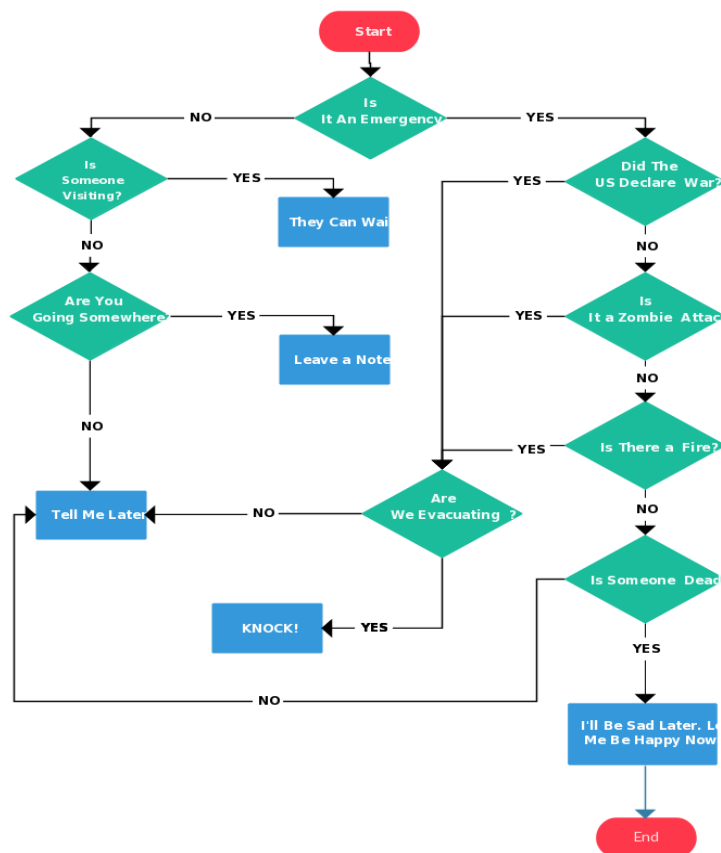
Understanding Flow Charts



9. Flowchart on getting the sum



10. Flowchart on Emergency



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