





مهم جداً

هذا الملف للمراجعة السريعة واخذ الملاحظات عليه فقط ،لانه يحتوي على اقل من 20% مما يتم شرحه في الفيديوهات الاستعجال والاعتماد عليه فقط سوف يجعلك تخسر كميه معلومات وخبرات كثيره

يجب عليك مشاهدة فيديو الدرس كاملا

لاتنسى عمل لايك ومشاركة القناة لتعم الفائدة للجميع
لا تنسونا من دعائكم

ProgrammingAdvices.com

Mohammed Abu-Hadhoud





سلسلة

الخوارزميات وحل المشاكل

Algorithms & Problem Solving

المستوى الاول

4	50	104	170
0,6	0,8	0,9	1,0
-2,1	-3,2	-4,2	-5,3
-2	-3	-4	-5
4	44	115	175
0,6	0,8	0,9	1,0
-0,4	-0,76	-1,12	-1,5
-1	-2	-3	-4
1,4	2,8	4,2	5,6
1	2	3	4

Mohammed Abu-Hadhoud
26+ Years of Experience
MBA, PMOC, PMP®, PMI-RMP®, CM, ITILF, MCPD, MCSD



Algorithms & Problem Solving

What is Algorithm?



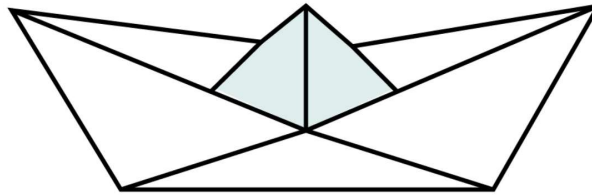
4	50	104	170
0,6	0,8	0,9	1,0
-2,1	-3,2	-4,2	-5,3
-2	-3	-4	-5
4	44	115	175
0,6	0,8	0,9	1,0
-0,4	-0,76	-1,12	-1,5
-1	-2	-3	-4
1,4	2,8	4,2	5,6
1	2	3	4

Mohammed Abu-Hadhoud

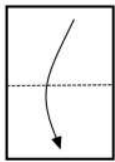
26+ Years of Experience

MBA, PMOC, PMP®, PMI-RMP®, CM, ITIL®, MCPD, MCSD

PROGRAMMING
ADVICES LEARN THE RIGHT WAY

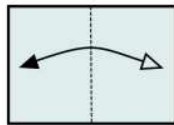


1



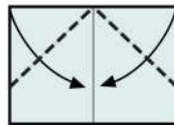
Start from a rectangle (ex. A4).
Fold in half.

2



Fold in half
and unfold.

3



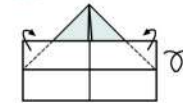
Fold to the center.

4



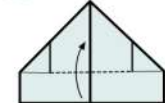
Fold the overlapping
strip upwards.

5



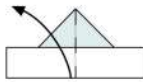
Fold corners
backwards. Turn over.

6



Fold strip upwards.

7



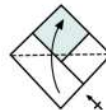
Open.

8



Opening in progress.

9



Fold triangle upwards.
Repeat behind.

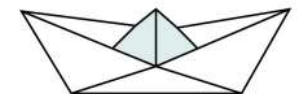
10

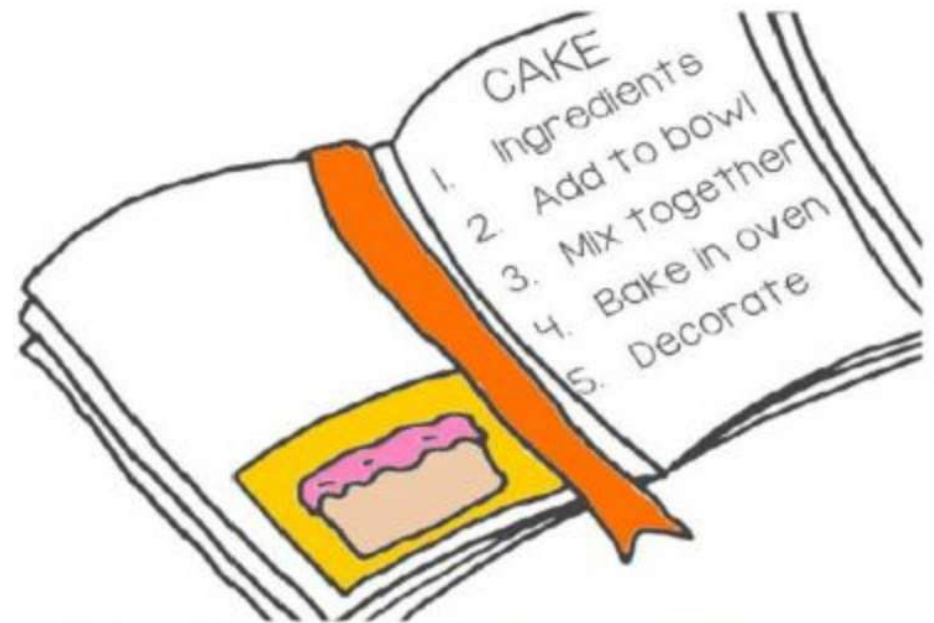


11



12





What is Algorithm?

Algorithm is a step-by-step instructions in order to solve a problem or perform a task.

Flowcharting



26+ Years of Experience

MBA, PMOC, PqMP⁺, PMP⁺, PMI-RMP⁺, CM, ITILF, MCPD, MCSD
$$yz - xt)I_s = -(xt - yz)I_s$$


What is Flowchart?

Flowchart is a programming design tool that uses graphical elements to visually depict the flow of logic within a program.

Introduction to Algorithms

Flowchart Symbols








Mohammed Abu-Hadhoud

26+ Years of Experience

MBA, PMOC, PMP®, PMI-RMP®, CM, ITIL®, MCPD, MCSD

PROGRAMMING
ADVICES LEARN THE RIGHT WAY

Flowchart Symbols

Symbol	Used For
	Used for Start and End
	Used for Input or Output
	Used for process/operations/calculations
	Used for asking a question and making a decision.
	Flow lines with arrows to connect the various flowcharting symbols

Introduction to Algorithms

Problems to Solve



4	50	104	170
0,6	0,8	0,9	1,0
-2,1	-3,2	-4,2	-5,3
-2	-3	-4	-5
4	44	115	175
0,6	0,8	0,9	1,0
-0,4	-0,76	-1,12	-1,5
-1	-2	-3	-4
1,4	2,8	4,2	5,6
1	2	3	4

Mohammed Abu-Hadhoud

26+ Years of Experience

MBA, PMOC, PMP®, PMI-RMP®, CM, ITILF, MCPD, MCSD



Introduction to Algorithms

Problem #1



Mohammed Abu-Hadhoud

26+ Years of Experience

MBA, PMOC, PMP®, PMI-RMP®, CM, ITILF, MCPD, MCSD



Problem #1

Write a program to print your name on screen.

Introduction to Algorithms

Problem #1 Solution



Mohammed Abu-Hadhoud

26+ Years of Experience

MBA, PMOC, PMP®, PMI-RMP®, CM, ITIL®, MCPD, MCSD

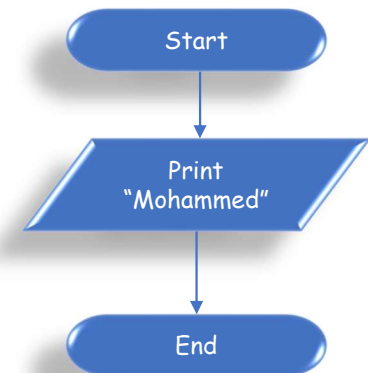
**PROGRAMMING
ADVICES** LEARN THE
RIGHT WAY

Problem #1 Solution Steps

Steps

Step 1: Print "Mohammed"

Flow Chart



Introduction to Algorithms

Problem #2



Mohammed Abu-Hadhoud

26+ Years of Experience

MBA, PMOC, PMP®, PMI-RMP®, CM, ITILF, MCPD, MCSD



Problem #2

Write a program to ask the use to enter his/her name and print it on screen.

Introduction to Algorithms

Problem #2 Solution



Mohammed Abu-Hadhoud

26+ Years of Experience

MBA, PMOC, PMP®, PMI-RMP®, CM, ITILF, MCPD, MCSB

4	50	104	170
0,6	0,8	0,9	1,0
-2,1	-3,2	-4,2	-5,3
-2	-3	-4	-5
4	44	115	175
0,6	0,8	0,9	1,0
-0,4	-0,76	-1,12	-1,5
-1	-2	-3	-4
1,4	2,8	4,2	5,6
1	2	3	4
5	6	7	8

$$Q_{\text{total}} = Q_1 + Q_2 = 3\epsilon_0 \frac{S}{d_1} U_0$$

$$C_1 = C_2 = \epsilon_0 \frac{S}{d_1} = 8,85 \text{ pF}$$

$$Q = \frac{Q_1 + Q_2}{2} = 13,275 \cdot 10^{-9} \text{ C}$$

$$U = \frac{Q}{C_1} = \frac{3}{2} U_0 = 1.500 \text{ V}$$

$$= \frac{1}{2} Q U = \frac{9}{8} \epsilon_0 \frac{S}{d_1} U_0^2 = 9,956 \cdot 10^{-4} \text{ J}$$

**PROGRAMMING
ADVICES** LEARN THE
RIGHT WAY

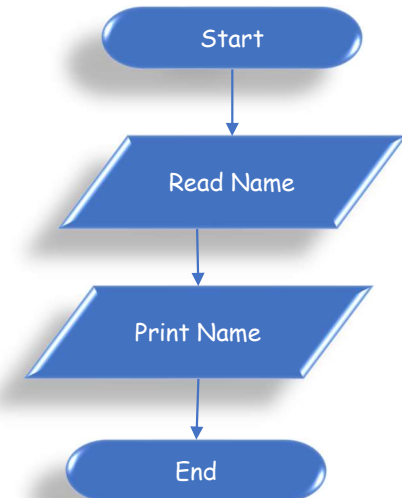
Problem #2 Solution Steps

Steps

Step 1: Ask the use to enter his name.

Step 2: Print the entered name.

Flow Chart



Introduction to Algorithms

Problem #3



Mohammed Abu-Hadhoud

26+ Years of Experience

MBA, PMOC, PMP®, PMI-RMP®, CM, ITIL®, MCPD, MCSD



Problem #3

Write a program to ask the user to enter a number, then Print "ODD" if its odd, Or "Even" if its even.

Introduction to Algorithms

Problem #3 Solution



Mohammed Abu-Hadhoud

26+ Years of Experience

MBA, PMOC, PMP®, PMI-RMP®, CM, ITILF, MCPD, MCSD

4	50	104	170
0,6	0,8	0,9	1,0
-2,1	-3,2	-4,2	-5,3
-2	-3	-4	-5
4	44	115	175
0,6	0,8	0,9	1,0
-0,4	-0,76	-1,12	-1,5
-1	-2	-3	-4
1,4	2,8	4,2	5,6
1	2	3	4
5	6	7	8

$$\begin{pmatrix} x & y \\ s & t \end{pmatrix} - \begin{pmatrix} x+t & 0 \\ 0 & x+y \end{pmatrix} = \begin{pmatrix} -t & y \\ s & -x \end{pmatrix}$$

$$yz - xt)I_0 = -(xt - yz)I_0$$

$$Q_{\text{total}} = Q_1 + Q_2 = 3\epsilon_0 \frac{S}{d_1} U_0$$

$$C_1 = C_2 = \epsilon_0 \frac{S}{d_1} = 8,85 \text{ pF}$$

$$Q = \frac{Q_1 + Q_2}{2} = 13,275 \cdot 10^{-9} \text{ C}$$

$$U = \frac{Q}{C_1} = \frac{3}{2} U_0 = 1.500 \text{ V}$$

$$= \frac{1}{2} QU = \frac{9}{8} \epsilon_0 \frac{S}{d_1} U_0^2 = 9,956 \cdot 10^{-4} \text{ J}$$

**PROGRAMMING
ADVICES** LEARN THE
RIGHT WAY

Problem #3 Solution

Steps

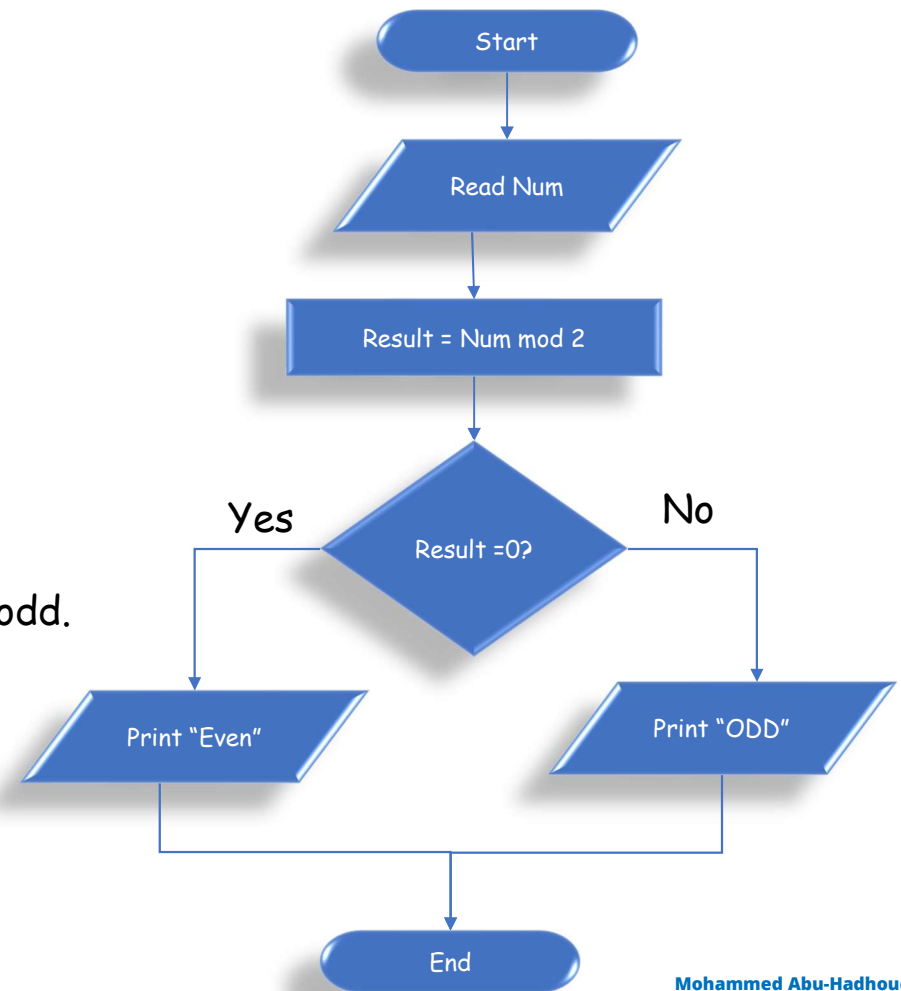
Step 1: Ask the use to enter a Number.

Step 2: $\text{Result} = \text{Num} \bmod 2$

Step 3: check if result =0 then its even otherwise it's odd.

Step 4: Print "ODD" or "Even" accordingly.

Flow Chart





Thank You

Mohammed Abu-Hadhoud

26+ Years of Experience

MBA, PMOC, PgMP®, PMP®, PMI-RMP®, CM, ITILF, MCPD, MCSd

