

course 5

Saturday, September 23, 2023 1:10 AM

problem 1 :

Problem:

Write a program print the multiplication table from 1 to 10 as follows:

Multipliaction Table From 1 to 10										
1	2	3	4	5	6	7	8	9	10	
1	2	3	4	5	6	7	8	9	10	
2	4	6	8	10	12	14	16	18	20	
3	6	9	12	15	18	21	24	27	30	
4	8	12	16	20	24	28	32	36	40	
5	10	15	20	25	30	35	40	45	50	
6	12	18	24	30	36	42	48	54	60	
7	14	21	28	35	42	49	56	63	70	
8	16	24	32	40	48	56	64	72	80	
9	18	27	36	45	54	63	72	81	90	
10	20	30	40	50	60	70	80	90	100	

problem 2 :

The banner features a large image of a man with a beard in a suit, standing next to a Rubik's cube. At the top left is a video thumbnail of the same man. To the right is a logo with a blue hexagon containing a white 'C++'. The main text reads "سلسلة الخوارزميات وحل المشاكل" (Series of Algorithms and Problem Solving) and "Algorithms & Problem Solving المستوى الثاني". Below that is the text "#02/2". At the bottom, it says "Print All Prime Numbers 1 to N". A small box at the bottom left identifies the author as "Mohammed Abu-Hadoud" with "26+ Years of Experience" and "MBA, PMP, PgMP, PMI-RMP, CM, ITILF, MCPD, MCSA". A logo for "PROGRAMMING ADVICES" with the tagline "LEARN THE RIGHT WAY" is at the bottom right.

Problem:

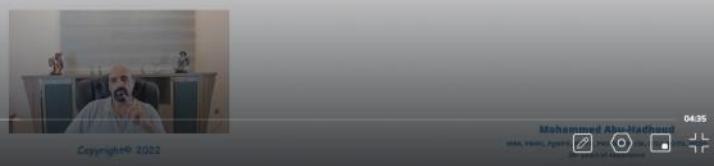
Write a program print all prime numbers from 1 to N.

Input:

10

Output:

1
2
3
5
7



problem 3 :

The image shows the cover of a video course. On the left, there's a portrait of a man in a suit next to a Rubik's cube. In the center, the title is displayed in Arabic and English: "سلسلة الخوارزميات وحل المشاكل Algorithms & Problem Solving المستوى الثاني #03/2 Perfect Number". Below the title, it says "#03/2 Perfect Number". At the bottom left, there's a bio for "Mohammed Abu-Hadhou" with "20+ Years of Experience" and "MBA, PMP, PMOC, PgMP, PMI-SP, PMI-RMP, CM, ITILF, MCSD, MCSD". At the bottom right, there's a logo for "PROGRAMMING ADVICES" with "LEARN THE" above it and some social media icons.

Problem:

Write a program to check if the number is Perfect or not?

Note: Perfect Number = Sum (all divisors)

$$28 = 1 + 2 + 4 + 7 + 14$$

$$6 = 1 + 2 + 3$$

Input:

28

12

Output:

28 is perfect.

12 is not perfect.



problem 4 :

The image shows the cover of a course titled "سلسلة الخوارزميات وحل المشاكل المستوى الثاني" (Algorithms & Problem Solving) in Arabic, and "Algorithms & Problem Solving" in English. The subtitle "#04/2" is prominently displayed in yellow. Below it, the text "Perfect Number from 1 to N" is also in yellow. On the left side of the cover, there is a photo of a man with a beard and glasses, and a large Rubik's cube. The cover also features the "C++" logo. At the bottom left, there is a bio for "Mohammed Abu-Hadoud" with his professional experience listed. At the bottom right, there is a logo for "PROGRAMMING ADVICES" with the tagline "LEARN THE RIGHT WAY".

Problem:

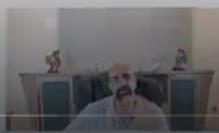
Write a program to print all perfect numbers from 1 to N

Input:

500

Output:

6
28
496



Mohammed Abu-Hadhoud
MBA, PMP, PgMP, PMBOK, CM, ITIL, MCSD

problem 5 :

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سلسلة
الخوارزميات وحل المشاكل
Algorithms & Problem Solving
المستوى الثاني
#05/2

Print Digits in a Reversed Order

00:19 06:19

Mohammed Abu-Hadhoud
26+ Years of Experience
MBA, PMP, PgMP, PMBOK, CM, ITIL, MCSD

PROGRAMMING ADVICE LEARN THIS RIGHT NOW

Problem:

Write a program to read a number and print it in a reversed order.

Input:

1234

Output:

4
3
2
1



Problem:

Write a program to read a number and print the sum of its digits.

Input:

1234

Output:

Sum Of Digits = 10



problem 7 :

The image shows a video cover for a course. On the left, there's a portrait of a man in a suit next to a Rubik's cube. In the center, the title 'سلسلة الخوارزميات وحل المشاكل المستوى الثاني' is written in Arabic, with 'Algorithms & Problem Solving' in English below it. To the right of the title is '#07/2'. Below the title, the subtitle 'Reverse Number' is shown. At the bottom left, there's a bio for 'Mohammed Abu-Hadhou' with '20+ Years of Experience' and 'MBA, PMP, PgMP, PMI-RMP, CML, ETILF, MCSD'. At the bottom right, the channel logo 'PROGRAMMING ADVICE' is present with a progress bar showing '00:25' and '05:37'.

Problem:

Write a program to read a number and print it reversed.

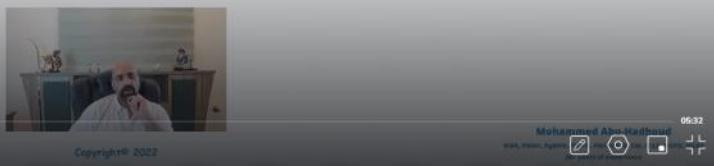
Input:

1234

Output:

Reverse is:

4321



problem 8 :

The image shows a video player interface for a course. On the left, there's a thumbnail of a man speaking. In the center, there's a large logo for 'C++' with a blue hexagon background. To the right of the logo, the title 'سلسلة الخوارزميات وحل المشاكل' is written in Arabic, followed by 'Algorithms & Problem Solving' in English. Below that, it says 'المستوى الثاني'. A large yellow '#08/2' indicates the episode number. Underneath, the topic 'Digit Frequency' is mentioned. At the bottom left, there's a bio for 'Mohammed Abu-Hadhou' with '26+ Years of Experience' and 'MBA, PMP, PgMP, PMI-RMP, CM, TTELF, MCPD, MCSD'. At the bottom right, the 'PROGRAMMING ADVICES' logo is visible with a play button icon, and the number '04:55' indicating the video duration.

Problem:

Write a program read a digit and a number , then print digit frequency in that number

Input

1223222

2

Output:

Digit 2 Frequency is 5 Time(s).



سلسلة
الخوارزميات وحل المشاكل
Algorithms & Problem Solving
المستوى الثاني
#09/2
Digit Frequency

Mohammed Abu-Hadoud
26+ Years of Experience
MBA, PMOC, PgMP®, PMP®, PMI-RMP®, CM, ITIL®, MCSD

P PROGRAMMING ADVICES LEARN THE RIGHT WAY

Problem:

Write a program read a number , then print all digit frequency in that number

Input

1223222



Output:

Digit 1 Frequency is 1 Time(s).
Digit 2 Frequency is 5 Time(s).
Digit 3 Frequency is 1 Time(s).



00:46 PROGRAMMING 06:16
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MBA, PMP®, PgMP®, PMI-RMP®, CM, ITIL®L, MCSD

problem 10 :

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سلسلة
الخوارزميات وحل المشاكل
Algorithms & Problem Solving
المستوى الثاني
#10/2
Print Digits in Order

Mohammed Abu-Hadhoud
26+ Years of Experience
MBA, PMP®, PgMP®, PMI-RMP®, CM, ITIL®L, MCSD

00:15 03:54
II 10 10 🔍

P PROGRAMMING ADVICE LEARN THE RIGHT WAY

Problem:

Write a program to read a number and print it in order from left to right.

Input:

1234



Output:

1
2
3
4



Mohammed Abu-Hadoud
www.programmingadvices.com

سلسلة
الخوارزميات وحل المشاكل
Algorithms & Problem Solving
المستوى الثاني
#11/2
Palindrome Number

Mohammed Abu-Hadoud
20+ Years of Experience
MBA, PMOC, PgMP®, PMP®, PMI-RMP®, CM, ITIL®. MCSD

PROGRAMMING
ADVICES

Problem:

Write a program to read a number and check if it is Palindrome?
Palindrome is a number that reads the same from right to left.

Input:

1234

12321

Output:

No , it is NOT a Palindrome number.

Yes , it is a Palindrome number.



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محمد أبو حذف

سلسلة الخوارزميات وحل المشاكل

Algorithms & Problem Solving

المستوى الثاني

#12/2

Inverted number pattern

Mohammed Abu-Hadhoud
20+ Years of Experience
MSA, PMP, PgMP, PMI-RMP, CM, ITILF, MCSD, MCSD

PROGRAMMING ADVICES

Problem:

Write a program to read a number and print inverted pattern as follows?

Input: **Input:**

3 5

Output: **Output:**

333 55555

22 4444

1 333

22

1



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Mohammed Abu-Hadoud
MBA, PMP®, PgMP®, PMI-RMP®, CM, ITILF, MCPD, MCSD

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الخوارزميات وحل المشاكل
Algorithms & Problem Solving
المستوى الثاني
#13/2
Number pattern

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

PROGRAMMING
ADVICES LEARN THE
RIGHT WAY

Problem:

Write a program to read a number and print inverted pattern as follows?

Input: **Input:**

3 5

Output: **Output:**

1 1
22 22
333 333
4444 4444
55555 55555



Mohammed Abu-Hadoud
MBA, PMDC, PgMP®, PMP®, PMI-RMP®, CM, ITIL®, MCSD, MCSA
26+ years of experience

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الخوارزميات وحل المشاكل
Algorithms & Problem Solving
المستوى الثاني
#14/2

Inverted letter pattern

00:14 Mohammed Abu-Hadoud 04:24
26+ Years of Experience
MBA, PMDC, PgMP®, PMP®, PMI-RMP®, CM, ITIL®, MCSD, MCSA

P | PROGRAMMING
ADVICES LEARN THE
RIGHT WAY

Problem:

Write a program to read a number and print inverted letter pattern as follows?

Input: **Input:**

3 5

Output: **Output:**

CCC EEEEE

BB DDDD

A CCC

BB

A



Mohammed Abu-Hadoud
www.mohamed-abuhadoud.com

00:26 PROGRAMMING
10 10

06:11



سلسلة
الخوارزميات وحل المشاكل
Algorithms & Problem Solving
المستوى الثاني

#15/2

Letter pattern



Mohammed Abu-Hadoud

20+ Years of Experience

MBA, PMP®, PgMP®, PMI-RMP®, CM, ITIL®, MCSE, MCSA



PROGRAMMING
ADVICES

09:52

Problem:

Write a program to read a number and print letter pattern as follows?

Input: `3`

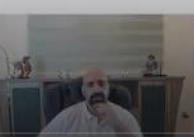
Output: `A`

BB

CCC

DDDD

EEEEEE



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سلسلة

الخوارزميات وحل المشاكل

Algorithms & Problem Solving

المستوى الثاني

#16/2

All Words from AAA to ZZZ



Mohammed Abu-Hadoud

20+ Years of Experience

MBA, PMP, PgMP, PMBOK, PMI-RMP, CM, ITILF, MCSD, MCSA

PROGRAMMING
ADVICES

05:42

Problem:

Write a program to print all words from AAA to ZZZ



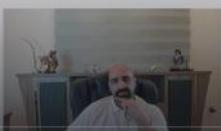
Output:

AAA

AAB

AAC

ZZZ



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Mohammed Abu-Hadhou
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سلسلة
الخوارزميات وحل المشاكل
Algorithms & Problem Solving
المستوى الثاني
#17/2
Guess a 3-Letter Password

Mohammed Abu-Hadhou
20+ Years of Experience
MBA, PMP, PgMP, PMI-RMP, PMI-ACP, CM, ITILF, MCSD

PROGRAMMING
ADVICES

Problem:

Write a program to guess a 3-Letter Password (all capital)

Input:

AAF

Output:

Trial [1] : AAA

Trial [2] : AAB

Trial [3] : AAC

Trial [4] : AAD

Trial [5] : AAE

Trial [6] : AAF

>Password is AAF

Found after 6 Trial(s)



Mohammed Abu-Hadoud 05:09
MBA, PMOC, PgMP®, PMP®, PMI-RMP®, CM, ITILF, MCSD, MCSE

سلسلة
الخوارزميات وحل المشاكل
Algorithms & Problem Solving
المستوى الثاني
#18/2
Encrypt/Decrypt Text

00:09 00:15
Mohammed Abu-Hadoud
20+ Years of Experience
MBA, PMOC, PgMP®, PMP®, PMI-RMP®, CM, ITILF, MCSD, MCSE
PROGRAMMING ADVICES

Problem:

Write a program to read a text and encrypt it , decrypt it.

Input:

Mohammed

Output:

Text Before Encryption : Mohammed

Text After Encryption : Oqjcoogf

Text After Decryption : Mohammed



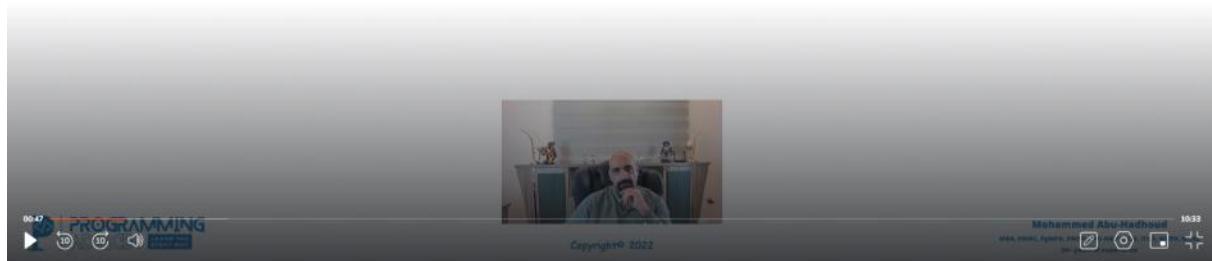
A screenshot of a course slide titled "سلسلة الخوارزميات وحل المشاكل Algorithms & Problem Solving المستوى الثاني". The slide features a large yellow "#19/2" and the text "Random 3 Numbers from 1 to 10". On the left, there's a portrait of a man in a suit next to a Rubik's cube. A smaller video thumbnail in the top left corner shows the same man speaking. The bottom of the slide includes the author's name "Mohammed Abu-Hadoud" and his credentials: "20+ Years of Experience", "MBA, PMP, PgMP, PMBOK, PMI-RMP, CM, ITILF, MCSD, MCSD". The bottom right corner contains the "PROGRAMMING ADVICE" logo and other course navigation links.

Problem:

Write a program to print 3 random numbers from 1 to 10.

Output:

9
5
3



سلسلة
الخوارزميات وحل المشاكل
Algorithms & Problem Solving
المستوى الثاني

#20/2

Random Small Letter, Capital
Letter, Special C, and Digit in order

Mohammed Abu-Hadoud
20+ Years of Experience
MBA, PMP, PgMP, PMBOK, PMI-RMP, CM, ITILF, MCSD

PROGRAMMING ADVICES

00:12 04:40

Problem:

Write a program to print random Small Letter, Capital Letter, Special Character, and Digit in order.

Output:

```
i  
G  
$  
7
```



Mohammed Abu-Hadoud 04:21
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سلسلة
الخوارزميات وحل المشاكل
Algorithms & Problem Solving
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#22/2

Repeated Elements Count In Array

00:12 04:21

Mohammed Abu-Hadoud
20+ Years of Experience
MBA, PMOC, PgMP®, PMP®, PMI-RMP®, CM, ITIL®, MCSD

PROGRAMMING ADVICES

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الخوارزميات وحل المشاكل
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#22/2

Repeated Elements Count In Array

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

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سلسلة
الخوارزميات وحل المشاكل
Algorithms & Problem Solving
المستوى الثاني
#23/2

Fill Array with random numbers
from 1 to 100

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

PROGRAMMING
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Problem:

Write a program to fill array with max size 100 with random numbers from 1 to 100.

Input:

10

Output:

Array Elements: 56 55 83 71 32 52 17 28 71 52



Problem:

Write a program to fill array with max size 100 with random numbers from 1 to 100, then print Max

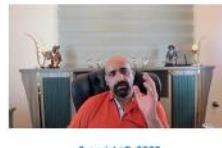
Input:

10

Output:

Array Elements: 65 91 54 42 75 32 53 57 57 30

Max Number is : 91



Mohammed Abu-Hadhou
MBA, PMI-ACP, PgMP, PMP, PMI-RMP, CM, ITIL, MCSD, MCSE
20+ years of experience



00:11

Mohammed Abu-Hadhou
20+ Years of Experience
MBA, PMI-ACP, PgMP, PMP, PMI-RMP, CM, ITIL, MCSD, MCSE

Exit full screen (F)

Problem:

Write a program to fill array with max size 100 with random numbers from 1 to 100, then print Minimum Number

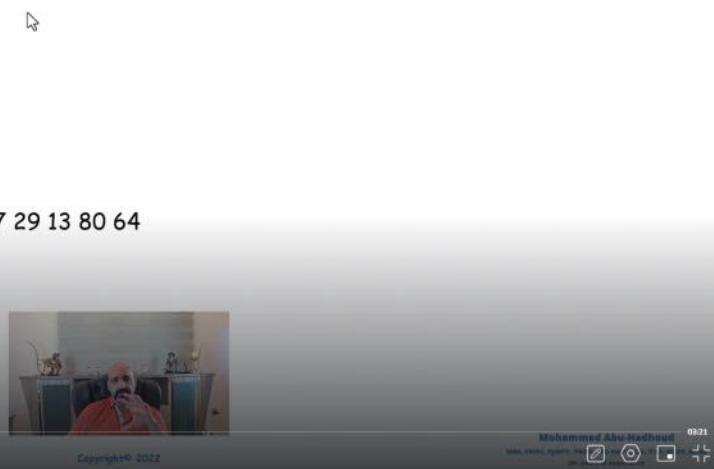
Input:

10

Output:

Array Elements: 30 99 72 47 95 67 29 13 80 64

Min Number is : 13



The image is a thumbnail for a video course. On the left, there's a smaller video frame showing a man in an orange shirt. The main title is "سلسلة الخوارزميات وحل المشاكل المستوى الثاني Algorithms & Problem Solving #26/2". Below the title, it says "Sum of Random Array". In the bottom left corner, there's a photo of a man in a blue suit standing next to a Rubik's cube. In the top left corner, there's a C++ logo. At the bottom, there's a bio for "Mohammed Abu-Hadoud" with "20+ Years of Experience" and "MBA, PMP, PgMP, PMI-RMP, CM, ITILF, MCSD". The bottom right corner has the "PROGRAMMING ADVICES" logo and a progress bar showing 00:35 of a 00:45 video.

Problem:

Write a program to fill array with max size 100 with random numbers from 1 to 100, then print sum of all number

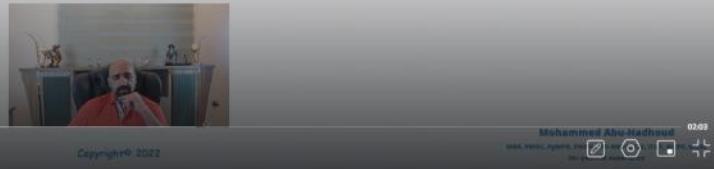
Input:

10

Output:

Array Elements: 10 62 22 40 12 75 23 32 25 75

Sum of all number is : 320



This is the main slide for the video titled '#27/2 Average of Random Array'. The slide features a large image of a man in a suit standing next to a Rubik's cube. In the top left corner, there is a smaller video thumbnail of the same man speaking. The title is centered in a large, bold font. Below the title, the subtitle 'Average of Random Array' is written in a yellow, stylized font. At the bottom left, there is a box containing the speaker's name, 'Mohammed Abu-Hadoud', and his experience, '20+ Years of Experience'. At the bottom right, there is a logo for 'PROGRAMMING ADVICES' and a progress bar indicating the video is at 02:44.

Problem:

Write a program to fill array with max size 100 with random numbers from 1 to 100, then print average of all number

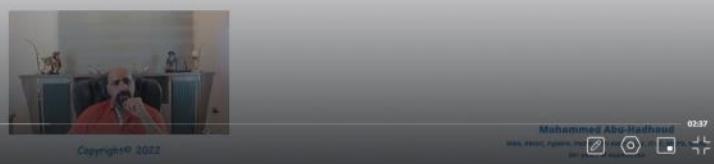
Input:

10 ↴

Output:

Array Elements: 24 36 44 73 8 56 98 67 33 71

Average of all number is : 51



Problem:

Write a program to fill array with max size 100 with random numbers from 1 to 100, copy it to another array and print it.

Input

10

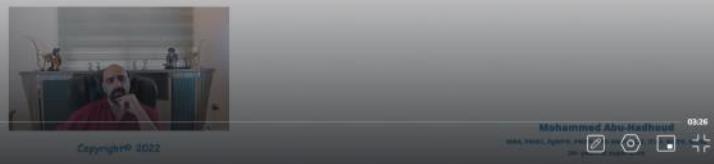
Output:

Array 1 elements:

1 47 51 18 85 62 51 61 82 4

Array 2 elements after copy:

1 47 51 18 85 62 51 61 82 4



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سلسلة
الخوارزميات وحل المشاكل
Algorithms & Problem Solving
المستوى الثاني
#29/2

Copy only prime numbers

Mohammed Abu-Hadoud
20+ Years of Experience
MBA, PMP, PgMP, PMBOK, PMI-RMP, CM, ITIL, MCSD

PROGRAMMING ADVICES

Problem:

Write a program to fill array with max size 100 with random numbers from 1 to 100, copy only prime numbers to another array and print it.

Input:

10

Output:

Array 1 elements:

42 68 35 1 70 25 79 59 63 65

Prime Numbers in Array2:

1 79



A promotional slide for a programming course. It features a large image of a man in a suit standing next to a Rubik's cube. In the upper left, there's a smaller video thumbnail of the same man. To the right, there's a large C++ logo. The main title is "سلسلة الخوارزميات وحل المشاكل المستوى الثاني" (Algorithms & Problem Solving Level 2). Below it is the number "#30/2". A subtitle at the bottom says "Sum of 2 arrays to a third one". The bottom left contains the author's bio: "Mohammed Abu-Hadoud 26+ Years of Experience MBA, PMP, PgMP, PMI-RMP, CM, ITILF, MCSD". The bottom right has the "PROGRAMMING ADVICES" logo and a "Full screen (F)" button.

Problem:

Write a program to fill array two arrays with max size 100 with random numbers from 1 to 100, sum their elements in a third array and print the results.

Input:

10

Output:

Array 1 elements:

42 68 35 1 70 25 79 59 63 65

Array 2 elements:

6 46 82 28 62 92 96 43 28 37

Sum of array1 and array2 elements:

48 114 117 29 132 117 175 102 91 102



Problem:

Write a program to fill array with ordered numbers from 1 to N, then print it, after that shuffle this array and print it after shuffle.

Input:

10

Output:

Array elements before shuffle:

1 2 3 4 5 6 7 8 9 10



Array elements after shuffle:

2 4 6 3 10 1 7 8 5 9



Mohammed Abu-Hadoud 06:08
MBA, PMP, PgMP, PMBB, PMI-RMP, CM, ITILF, MCSD, MCSA

سلسلة
الخوارزميات وحل المشاكل
Algorithms & Problem Solving
المستوى الثاني
#32/2

Copy Array In Reverse Order

Mohammed Abu-Hadoud
20+ Years of Experience
MBA, PMP, PgMP, PMBB, PMI-RMP, CM, ITILF, MCSD, MCSA

PROGRAMMING
ADVICES

00:15 10 10 06:08

Problem:

Write a program to fill array with max size 100 with random numbers from 1 to 100, copy it to another array in reverse order and print it.

Input

10



Output:

Array 1 elements:

64 8 62 19 2 21 15 74 96 85

Array 2 elements after copying array 1 in reversed order:

85 96 74 15 21 2 19 62 8 64



00:24 PROGRAMMING
10 10 Copyright © 2022

سلسلة
الخوارزميات وحل المشاكل
Algorithms & Problem Solving
المستوى الثاني
#33/2

Fill Array With Keys

Mohammed Abu-Hadoud
20+ Years of Experience
MBA, PMP, PgMP, PMI-RMP, CM, ITILF, MCSD

PROGRAMMING
ADVICES

Problem:

Write a program to read how many keys to generate and fill them in array then print them on the screen.

Input:

5



Output:

Array elements:

```
Array[0] : NRXC-DXRO-QEAM-WRWE  
Array[1] : BJTR-KIKF-ATEW-WNTT  
Array[2] : QOFX-KZEL-SSDP-AKSI  
Array[3] : GFOI-ELFX-ZCVE-PSTP  
Array[4] : MATF-PRQA-PQEQQ-TRIM
```



00:23 PROGRAMMING 06/02
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MBA, PMP, PgMP, PMBOK, PMI-RMP, CM, ITILF, MCSD, MCSE

سلسلة
الخوارزميات وحل المشاكل
Algorithms & Problem Solving
المستوى الثاني
#34/2

Return number index in array

Mohammed Abu-Hadoud
20+ Years of Experience
MBA, PMP, PgMP, PMBOK, PMI-RMP, CM, ITILF, MCSD, MCSE

PROGRAMMING
ADVICES

Problem:

Write a program to fill array with max size 100 with random numbers from 1 to 100, read number and return its index in array if found otherwise return -1.

Input

10

Output:

Array 1 elements:

80 79 12 80 81 29 3 37 25 91

Input

10

Output:

Array 1 elements:

80 79 12 80 81 29 3 37 25 91

Please enter a number to search for?

12

Number you are looking for is: 12

The number found at position: 2

The number found its order : 3

Please enter a number to search for?

55

Number you are looking for is: 55

The number is not found :-(



Mohammed Abu-Madhoush

PROGRAMMING

04/27



سلسلة
الخوارزميات وحل المشاكل
Algorithms & Problem Solving
المستوى الثاني
#35/2

Check Number In Array

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MBA, PMOC, PgMP, PMP, PMI-RMP, CM, ITILF, MCPO, MCSQ

PROGRAMMING ADVICES

Problem:

Write a program to fill array with max size 100 with random numbers from 1 to 100, read number and print if it's found or not (reuse code in prev problem).

Input

10

Output:

Array 1 elements:

83 92 66 21 62 96 40 13 19 30

Input

10

Output:

Array 1 elements:

83 92 66 21 62 96 40 13 19 30

Please enter a number to search for?

66

Number you are looking for is: 66

Yes, The number is found :-)

Please enter a number to search for?

19

Number you are looking for is: 19

No, The number is not found :-(



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#36/2

Add Array Element Simi Dynamic

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PROGRAMMING ADVICES

Problem:

Write a program to dynamically read numbers and save them in an array
Max size of array is 100, allocate simi-dynamic array length.

Output:

Please enter a number? 10

Do you want to add more numbers? [0]:No,[1]:yes? 1

Please enter a number? 20

Do you want to add more numbers? [0]:No,[1]:yes? 1

Please enter a number? 30

Do you want to add more numbers? [0]:No,[1]:yes? 0

Array Length: 3

Array elements: 10 20 30



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#37/2

Resolve problem 28/2 Copy Array
Using AddArrayElement

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P PROGRAMMING ADVICES LEARN THE RIGHT WAY

Problem:

Write a program to fill array with max size 100 with random numbers from 1 to 100, copy it to another array using `AddArrayElement`, and print it.

Input

10

Output:

Array 1 elements:

1 47 51 18 85 62 51 61 82 4

Array 2 elements after copy:

1 47 51 18 85 62 51 61 82 4

01:00 04:47

PROGRAMMING ADVICES

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#38/2

Copy Odd Numbers to a new Array

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PROGRAMMING ADVICES

Problem:

Write a program to fill array with max size 100 with random numbers from 1 to 100, copy only odd numbers to another array using AddArrayElement, and print it.

Input

10

Output:

Array 1 elements:

59 14 84 36 6 51 48 91 96 67

Array 2 Odd numbers:

59 51 91 67

00:34 04:20

PROGRAMMING ADVICES

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#39/2

Copy Prime Numbers to a new Array

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PROGRAMMING
ADVICES

Problem:

Write a program to fill array with max size 100 with random numbers from 1 to 100, copy only prime numbers to another array using AddArrayElement, and print it.

Input

10

Output:

Array 1 elements:

61 100 32 75 81 95 50 98 13 70

Array 2 Prime numbers:

61 13



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Mohammed Abu-Hadoud
MBA, PMOC, PgMP, PMP, PMI-RMP, CM, ITIL, MCSD
20+ years of experience

**سلسلة
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Algorithms & Problem Solving
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#40/2

Copy Distinct Numbers to Array

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PROGRAMMING ADVICES LEARN THE RIGHT WAY

Problem:

Write a program to fill array with numbers, then print distinct numbers to another array.

Output:

Array 1 elements:

10 10 10 50 50 70 70 70 70 90

Array 2 distinct elements:

10 50 70 90





Problem:

Write a program to fill array with numbers, then check if it is Palindrome array or not, Note: Palindrome array can be read the same from right to left and from left to right.

Input

10 20 30 30 20 10



Output:

Array Elements:

10 20 30 30 20 10

Yes array is Palindrome



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#42/2

Count Odd Numbers in Array

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PROGRAMMING ADVICES

Problem:

Write a program to fill array with max size 100 with random numbers from 1 to 100, then print the count of Odd numbers.

Input:

10

Output:

Array Elements: 60 78 15 49 56 6 4 3 21 23

Odd Numbers count is: 5

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Mohammed Abu-Hadoud 09:31
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Problem:

Write a program to fill array with max size 100 with random numbers from 1 to 100, then print the count of Even numbers.

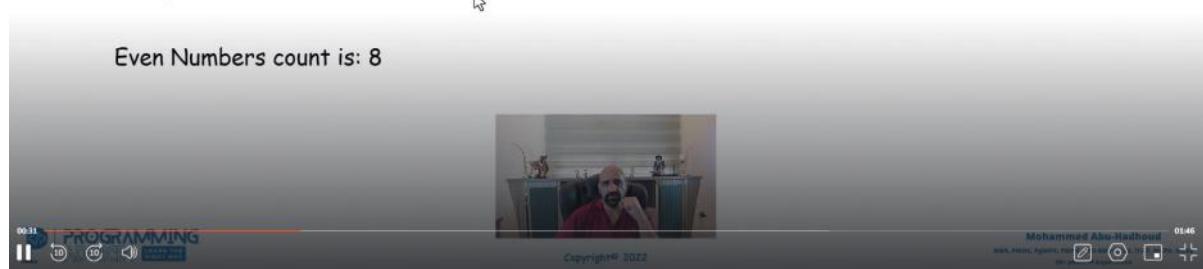
Input:

10

Output:

Array Elements: 14 92 70 15 58 76 84 62 10 43

Even Numbers count is: 8





Problem:

Write a program to fill array with max size 100 with random numbers from -100 to 100, then print the count of Positive numbers.

Input:

10

Output:

Array Elements: 17 -9 -9 -90 -72 -100 -4 60 -84 -15

Positive Numbers count is: 2



Mohammed Abu-Hadoud 02:32



Problem:

Write a program to fill array with max size 100 with random numbers from -100 to 100, then print the count of Negative numbers.

Input:

10
→

Output:

Array Elements: -58 -16 -21 -4 -91 82 98 66 -8 -33

Negative Numbers count is: 7





Problem:

Write a program to print abs of numbers , don't use built in abs function

Input:

-10

Output:

My abs Result : 10

C++ abs Result: 10



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#47/2

MyRound

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PROGRAMMING ADVICE

Problem:

Write a program to print round of numbers , don't use built in round function

Input:

10.7

Input:

10.3

Input:

-10.7

Output:

My Round Result : 11
C++ Round Result: 11

Output:

My Round Result : 10
C++ Round Result: 10

Output:

My Round Result : -11
C++ Round Result: -11

00:35 07:48

PROGRAMMING ADVICE

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Problem:

Write a program to print floor of numbers , don't use built in floor function

Input:

10.7

Input:

10.3

Input:

-10.3

Output:

My MyFloor Result : 10
C++ floor Result : 10

Output:

My MyFloor Result : 10
C++ floor Result : 10

Output:

My MyFloor Result : -11
C++ floor Result : -11





Problem:

Write a program to print *Ceil* of numbers , don't use built in *Ceil* function

Input:

10.7

Input:

-10.7

Output:

My MyCeil Result : 11

C++ Ceil Result : 11

Output:

My MyCeil Result : -10

C++ Ceil Result: -10





Problem:

Write a program to print Sqrt of numbers , don't use built in sqrt function

Input:

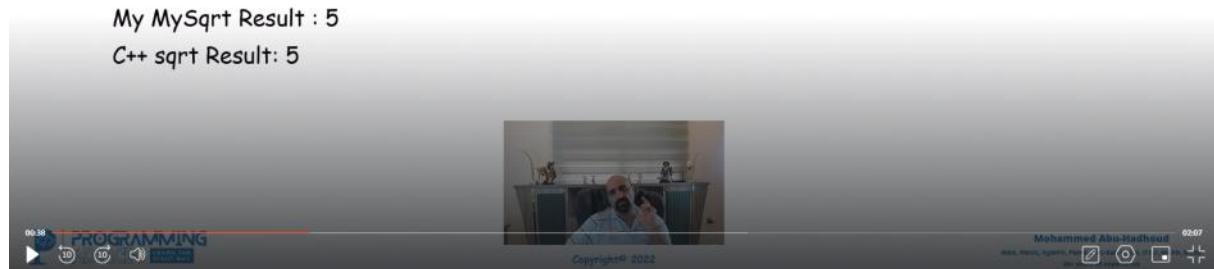
25



Output:

My MySqrt Result : 5

C++ sqrt Result: 5



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Project 1

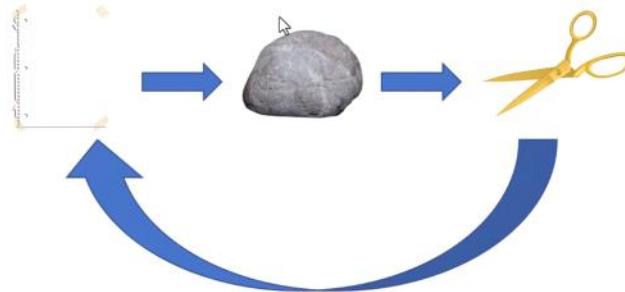
Stone-Paper-Scissor

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PROGRAMMING
ADVICE'S
TECHNIQUE
EIGHT WAY

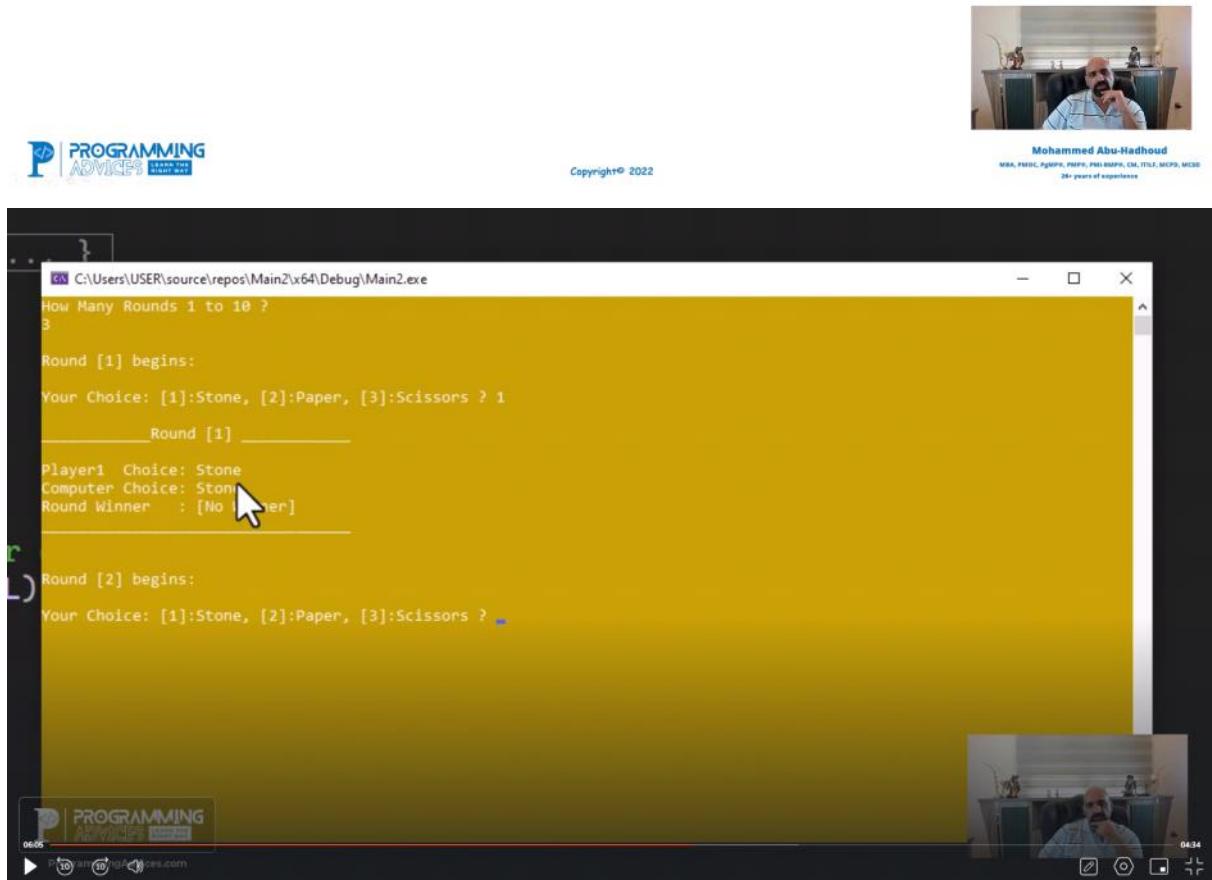
Problem:

Write a small game program for Stone-Paper-Scissor



Requirements:

- Ask for how many rounds the game will be.
- Start each round Player vs Computer.
- Show the results with each round.
- If computer wins the round ring a bell , and screed red.
- If player won the round show green screen.
- After all rounds show game over the print game results, then ask the user if s/he want to play again?



```
C:\Users\USER\source\repos>Main2\x64\Debug>Main2.exe

Round [3]
Player1 Choice: Paper
Computer Choice: Paper
Round Winner : [No Winner]

+++ Game Over+++
[Game Results ]
Game Rounds : 3
Player1 won times : 0
Computer won times : 0
Draw times : 3
Final Winner : No Winner

Do you want to play again? Y/N? 
```



PROGRAMMING AWARDS

```
C:\Users\USER\source\repos>Main2\x64\Debug>Main2.exe
How Many Rounds 1 to 10 ?
5

Round [1] begins:
Your Choice: [1]:Stone, [2]:Paper, [3]:Scissors ? 1

Round [1]
Player1 Choice: Stone
Computer Choice: Paper
Round Winner : [Computer]

Round [2] begins:
Your Choice: [1]:Stone, [2]:Paper, [3]:Scissors ? 
```



PROGRAMMING AWARDS

```
C:\Users\USER\source\repos>Main2\x64\Debug>Main2.exe

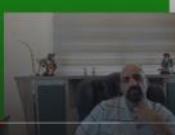
Round [3] begins:
Your Choice: [1]:Stone, [2]:Paper, [3]:Scissors ? 1

Round [3]
Player1 Choice: Stone
Computer Choice: Stone
Round Winner : [No Winner]

Round [4] begins:
Your Choice: [1]:Stone, [2]:Paper, [3]:Scissors ? 1

Round [4]
Player1 Choice: Stone
Computer Choice: Scissors
Round Winner : [Player1]

Round [5] begins:
PROGRAMMING AWARDS
Your Choice: [1]:Stone, [2]:Paper, [3]:Scissors ? 
```



```
C:\Users\USER\source\repos\Main2\x64\Debug\Main2.exe
Round Winner : [Player1]
_____
Round [5] begins:
Your Choice: [1]:Stone, [2]:Paper, [3]:Scissors ? 3
_____
Round [5]
_____
Player1 Choice: Scissors
Computer Choice: Stone
Round Winner : [Computer]
_____
+++ Game Over ***
_____
[Game Results ]
_____
Game Rounds : 5
Player1 won times : 1
Computer won times : 3
Draw times : 1
Final Winner : Computer
_____
PROGRAMMING
ADVISER  Do you want to play again? Y/N? 

```

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Project 2

Math Game

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10 100 %

P | PROGRAMMING ADVICE'S

How Many Questions do you want to answer ? 5
Enter Questions Level [1] Easy, [2] Med, [3] Hard, [4] Mix ? 1
Enter Operation Type [1] Add, [2] Sub, [3] Mul, [4] Div, [5] Mix ? 5

Question [1/5]

6
10 /

0
Right Answer :-)

Question [2/5]

3
1 /

5
Wrong Answer :-(
The right answer is: 3

Question [3/5]

8
10 /

0

The right answer is: 18

Question [5/5]

2

6 x

12

Right Answer :-)

Final Results is PASS :-)

Number of Questions: 5
Questions Level : Easy
OpType : Mix
Number of Right Answers: 3
Number of Wrong Answers: 2

Do you want to play again? Y/N?

71
58 +

129

Right Answer :-)

Question [3/3]

59

68 +

3

Wrong Answer :-(

The right answer is: 127

Final Results is Fail :-(

Number of Questions: 3
Questions Level : Hard
OpType : +
Number of Right Answers: 1
Number of Wrong Answers: 2

Do you want to play again? Y/N?