

**MENEDŻERSKA AKADEMIA NAUK STOSOWANYCH W  
WARSZAWIE  
55 DPH COMPUTER ENGINEERING**



**MENEDŻERSKA AKADEMIA  
NAUK STOSOWANYCH  
W WARSZAWIE**

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**PROGRAMMING IN SCRIPTING LANGUAGES**

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- Write a program that uses a for loop to print the numbers 1 to 10 to the console.

## Solution 01

```
#1
for i in range(1, 11):
    print(i)
```

```
"C:\Users\enfal\OneDrive\Masaüstü\laboratory02 homework\Scripts\python.exe" "C:\Users\enfal\PycharmProjects\laboratory02 homework\main.py"
1
2
3
4
5
6
7
8
9
10
```

## Question 02

Write a program that takes user input for a number and prints all the even numbers from 0 to that number

```
#2
number = int(input("Write a number: "))

for i in range(0, number+1, 2):
    print(i)
```

## Solution 02

```
Write a number: 10
0
2
4
6
8
10
```

## Question 03

Write a function that takes a list of numbers and returns the average of those numbers.

## Solution 03

```
#3
def calculate_average(numbers):
    total = sum(numbers)
    count = len(numbers)
    average = total / count
    return average
numbers = [3, 5, 7, 11, 2, 9]
average = calculate_average (numbers)
print("The average is:", average)
```

```
The average is: 6.166666666666667
```

## Question 04

Write a program that uses a while loop to print the Fibonacci sequence up to a user-specified number.

## Solution 04

```
#4
limit = int(input("Enter a number: "))
a, b = 0, 1
while a <= limit:
    print(a)
    a, b = b, a + b
```

```
Enter a number: 12
0
1
1
2
3
5
8
```

## Question 05

Write a program that uses the try-except block to catch and handle exceptions.

## Solution 05

```
#5
while True:
    try:
        x = int(input("Please enter a number: "))
        y = 10 / x
        print("Result:", y)
        break
    except ValueError:
        print("Invalid input, try again.")
    except ZeroDivisionError:
        print("Divide by zero error, please enter a different number.")
```

```
Please enter a number: ABC
Invalid input, try again.
Please enter a number: 0
Divide by zero error, please enter a different number.
Please enter a number: 45
Result: 0.2222222222222222
```

## Question 06

Write a program to calculate the factorial of a given number

## Solution 06

```
#6
number = int (input("Please enter the number you want to find the
factorial...\n"))
factorial = 1
i=1
if number >= 0:
    while i <= number:
        factorial*=i
        i+=1
    print("The factorial of the number you entered:",factorial)
else:
    print ("Negative numbers do not have a factorial!")
```

```
Please enter the number you want to find the factorial...
5
The factorial of the number you entered: 120
```



## Question 07

Write a program to check if a given string is a palindrome or not.

## Solution 07

```
#7
s = input("enter the value : ")
reverse = s[::-1]
if( s == reverse ):
    print("yes it is palindrome")
else:
    print("no it is not polindrome")
```

```
enter the value : 1881
yes it is palindrome
```

## Question 08

Write a program to find the second largest element in an array

## Solution 08

```
#8
list1 = [31, 44, 9, 75, 25]
new_list = set(list1)
new_list.remove(max(new_list))
print(max(new_list))
```

75 44 31 25 9

44

## Question 09

Write a program to sort an array in ascending order.

## Solution 09

```
#9
numbers = [5,6,4,7,9,1,2,3,10]
numbers.sort()
print("List in Ascending Order:" , numbers)
```

```
List in Ascending Order: [1, 2, 3, 4, 5, 6, 7, 9, 10]
```