4.(i) Palindrome: def is_palindrome(n): index = 0)//2: \Rightarrow if n [index]! = n E! - index]: while index Llenin) //2: return False index+=1 flass tolapa de toladom toami return True n=input ("Enter a String:")

if is-palindrome(n): print ("The given string is patind to me =1) else: "The given string is not palindrome.") Enter a string: raucarl The given string is a palindrome? ii) area of circle def area_of_circle (radicis)(:10 minus) import math return math-pi * radius * *12 paisents solt soins SA clay poils is 43 radius = float (input [Enter radius of the circle: ") def main(): area = area - of _ circle (radius) + & 1 & 10 86 print sti The area of circle is: {area:. af 3") olp:- Enter radius of the circle: 5 The onea of circle is: 78.54 5. Graph line: import matplotlib. Pyplot asplt x=[1,2,3,4] V- [10,20, 25,30]

plt. title ["Basic line Graph") pit. żlabel ('x-axis") pit. ylabel ("y-axis") plt.show() 10.0 3.0 3.5 4.0 Try, Except, Finally + Errors try: list=[1,2,3] Manufailed 1 days Print (list[5]) exapt indexerror: print ("Index out of range!") The about plans to some to be finally: Print ("Index Check completed.") if a) March John (12) Fry: result = "2" + 2 estept type error:

```
Type mismatch error!")
                             11 20 July 184
                                 STATE OF THE PARTY
7. Gruess number:
                               YITA - YOU THOUSE
  import random
  Secret = random. randint (1,10)
  guess = int (input ("Gruess a number between 1 and
   if guess == seout:
        print ("wrrect!")
    elif guess < Secret:
         print ("Too low!")
    else:
         Print (" Too high!")
4. def check_ string(S):
     if s = = S [::-i]:
        print ("palindrome")
                                  (图本) (III)
     else:
         print (" Not palindrome")
                               and the first of the file
   def a area_of_ circle (radius):
      retwon PI* radius * radius
    def odd-even(n):
      if n'1. 2 == 0:
                                    WAS HIST
          Drint ["Even"]
```

and and a still will a tonic : 92/9 print ("odd") · 自己的 一个 tille ho check_String (madam") associatelear ((comming)) apour our mi print ("Area:", area - circle (5)) odd_ even (3) I.W. ride davol dod die Juni 8. Numpy Array Math · havai 1 941 import numpy as np () trung arr = np. array ([1,2,3]) Print (" original :", arr) how to me is poper still Print (" Add 2:", arr +2). Print (" multiply by 3:1", arr #3) print (" sum: " np: sum (arr)) print (" mean:", np. mean(arr)) () Line, i fasting 9. calculator & Search: duct liets ") organition / Imtonio strait a=10 b=5 () ing Mulau shia. Print ("Add:", a+b) whole Constant Print ("subtract:", a-b) print ("multiply:", a*b)

Print ("Divide:", a. 10) nums = [4,2,7,4,9] sor i in range (untnums)): if nums [i] == Key: · print (" found at inded:", i) A Principal Prin Fount = Trul preak print ("Not Found") if not found: 10. File copy & word count (- 150 : la rigine) Titorro " a bha" with open ("Source. text", "w") as fill f-write ("Hello world from python!") with open ("source tact" , ") as for content = f. read() with open (" copy. talt", "w") as f: f.write (wostent) words = wortent.split() Print (" Total words: un (words)) A Phanta

```
11. Built-in, List, Tuple, Dict ops
                                 · William,
print (len ("Hello"))
                          JAN: LEVOINE
 print (abs (-5))
                          ", Lit 10 bull ?"
 print (type(10))
                    SHAME INTER MONTHALL FIFTE !
 Print (max(3,7))
 Print (min(4,2))
                             Au or tham Actini
                         CLEVILLE ONLOW OF LEVEL
  my-list = [1,2,3]
                        (Carp) 1) Horro-90-3
  my-list.append (4)
                        (G ; a/: A xirtula") frient
  my-list. remove (2)
   Print (my_list[1])
                        (a l'a/: a xirjoja") foira
   my-list.insert (1,9)
                             dtA = xillom -mus
   Print (my-list)
                             TIA = 9 2092 PLAT
   my-tuple = (1,2,3) dom-muz ["1/:muz") /11/1
   Print (my-tuple [0]) roll "al : Scogeaper") dais
   Print (len(my-tuple))
    my-dict = ["a":1, "b": 2 3
    Print (my_dict [a])
     My-dict ["c"] = 3
     Print (my-dict.get ("b"))
```

12. Lambda function: Square = lambda X: X * X print ("square of 4 isi", Squar (4)) 13. Matrix Addition & Transpose: (1:18) 2601 ((S. A) (im) import numpy as np A=np. array [[[1,2], [3,4]-]) B=np. array ([[5,4], [38]]) print ("Matrix A:\n", A) (6) siones lai print ("Matrix B: /n", B) ([i] deil-pin). $Sum_{matrix} = A + B$ (P1) + 893711. 1311 Transpose = A.T (Jail-pm). print ("sum: \n", Sum-matrix)

print ("Transpose: \n", transpose)

"" (augustion) mill