**PYTHON LAB 10**

**Name:MAYUR NANDANIYA**

**Roll no: 24BCH132**

**Div:2 ( E4)**

*Q1*

*Def fun():*

*Print(“This is function fun()”)*

*Def disp():*

*Print(“This is function disp()”)*

*Def msg():*

*Print(“This is function msg()”)*

*# Storing functions in a list*

*Functions\_list = [fun, disp, msg]*

*# Calling functions one by one using a loop*

*For func in functions\_list:*

*Func()*

*Output*

*This is function fun()*

*This is function disp()*

*This is function msg()*

*Q2*

*# Define the two lists*

*List1 = [1, 2, 3, 4, 5, 6]*

*List2 = [6, 5, 4, 3, 2, 1]*

*# Use map and lambda to add corresponding elements*

*Result = list(map(lambda x, y: x + y, list1, list2))*

*# Print the result*

*Print(“Resultant List:”, result)*

*Output*

*Resultant List: [7, 7, 7, 7, 7, 7]*

*Q3*

*Import random*

*# Generate a list of 10 random numbers between -15 and 15*

*Random\_numbers = [random.randint(-15, 15) for \_ in range(10)]*

*Print(“Random Numbers:”, random\_numbers)*

*# Create a new list with the squares of these numbers*

*Squared\_numbers = [x\*\*2 for x in random\_numbers]*

*Print(“Squared Numbers:”, squared\_numbers)*

*Output*

*Random Numbers: [12, -3, 7, -15, 0, 11, -5, 6, -13, 9]*

*Squared Numbers: [144, 9, 49, 225, 0, 121, 25, 36, 169, 81]*

*Q4*

*# Given list*

*Lst = [‘madam’, ‘Python’, ‘malayalam’, 12321]*

*# Function to check palindrome*

*Def is\_palindrome(s):*

*# Convert to string to handle both strings and integers*

*S = str(s)*

*Return s == s[::-1]*

*# Print palindrome strings*

*Print(“Palindromes in the list are:”)*

*For item in lst:*

*If is\_palindrome(item):*

*Print(item)*

*Output*

*Palindromes in the list are:*

*Madam*

*Malayalam*

*12321*

*Q5*

*# List of faculty member names*

*Faculty\_names = [“Alexander”, “John”, “Catherine”, “Mike”, “Elizabeth”, “Rajesh”, “Jennifer”, “Robert”]*

*# Using list comprehension to filter names with length more than 8 characters*

*Filtered\_names = [name for name in faculty\_names if len(name) <= 8]*

*# Display the result*

*Print(“Names with 8 or fewer characters:”, filtered\_names)*

*Output*

*Names with 8 or fewer characters: [‘John’, ‘Mike’, ‘Rajesh’, ‘Robert’]*