

## MACHINE TEST – PYTHON DJANGO

**Duration: 3-4 Hours**

**Task 1.** Create a project in Django, there will be 3 form

1. Login  
Fields: Username, Password
2. Signup  
Fields: Name, Email (username), Password ,Profile Image
3. Home Page  
after login show complete details of user in next page.  
Fields: Show all user's registered using signup  
Column fields: Srno, username, created date.

Note. data should be saved using ajax

**Task 2.** Implement following web service api. (RESTFUL API)

1. Login  
Fields: Username, Password
2. Signup  
Fields: Name, Email (username), Password ,Profile Image,MobileNo
3. Update Profile
4. Show Profile details

**Task 3.** Logical python code:

**Q1 :** Given below is the keypad of a Mobile. As you can see, each number is also associated with 3 to 4 characters each. You need to write the program in such a way that input to program is any number e.g 12 or 123 or 1234. As an output you need to print all the permutations of words that can form with given digits in alphabetical order.

1	ABC 2	DEF 3
GHI 4	JKL 5	MNO 6
PQRS 7	TUV 8	WXYZ 9
*	0	#

e.g. If input number is 23, possible words which can be formed are (Alphabetical order): ad ae af bd be bf cd cd cf

If input number is 234, possible words which can be formed are (Alphabetical order):

adg adh adi aeg aeh aei afg afh afi bdg bdh bdi beg beh bei bfg bfh bfi cdg cdh cdi ceg ceh cei cfg cfh cfi

**2)** py\_fun: Given three integers between 1 and 11, if their sum is less than or equal to 21, return their sum. If their sum exceeds 21 and there's an eleven, reduce the total sum by 10. Finally, if the sum (even after adjustment) exceeds 21, return 'BUST'

py\_fun (5,6,7) --> 18

py\_fun (9,9,9) --> 'BUST'

py\_fun (9,9,11) --> 19

**3)** Create the database "CompanyXYZ" with table name "Employees". After creation of database and table, write the SQL queries for following questions.

- a) Print name, surname of employee having maximum salary in company.
- b) Print maximum salaries in each department.
- c) List of department's name. (Unique, no repetition).
- d) Delete the employee who has least salary in "Sales" Department.

**NOTE:** DO NOT SHARE THIS WITH ANYBODY.

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