**Week 6- Programs on dictionary and Files**

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| Program 1 | Write a program to print a dictionary where the keys are numbers between 1 and 15 and the values are cube of keys. |
|  | **Input:**  **Enter range till you need to generate cubes: 10**  **output:**  **The resultant dictionary with cube as value numbers between 1 and 10 is**  **{1: 1, 2: 8, 3: 27, 4: 64, 5: 125, 6: 216, 7: 343, 8: 512, 9: 729, 10: 1000}** |
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| Program 2 | Construct dictionary phone\_book with :  Key:number of entries, Values: (name,phone number,email,address) and perform the following operations:  i) Add a new number to phone\_book  ii) delete entry from phone book. |
|  | Input:  values= [("Rashma",8105731555,"rashma@gmail.com","bangalore"),("Saritha",9582161900,"saritha@gmail.com","Mangalore"),("Bharathi",9276895311,"bharathi@yahoo.com","Coimbatore"), ("deepthi",8976885553,"deepthi@gmail.com","bangalore"),("kakoli",8816121598,"kakili@gmail.com","dispur")]  **output:**  **Phone book**  **{1: ('Rashma', 8105731555, 'rashma@gmail.com', 'bangalore'), 2: ('Saritha', 9582161900, 'saritha@gmail.com', 'Mangalore'), 3: ('Bharathi', 9276895311, 'bharathi@yahoo.com', 'Coimbatore'), 4: ('deepthi', 8976885553, 'deepthi@gmail.com', 'bangalore'), 5: ('kakoli', 8816121598, 'kakili@gmail.com', 'dispur')}**  **Hint:**  **>>> val=['a','b','c']**  **>>> d=dict(enumerate(val,1))**  **>>> d**  **{1: 'a', 2: 'b', 3: 'c'}**  **>>> val1=[('a',10),('b',20),('c',30)]**  **>>> d1=dict(enumerate(val1,1))**  **>>> d1**  **{1: ('a', 10), 2: ('b', 20), 3: ('c', 30)}**  # i) Add new number to phone book  **>>> val1=[('a',10),('b',20),('c',30)]**  **>>> d1=dict(enumerate(val1,1))**  **>>> d1**  **{1: ('a', 10), 2: ('b', 20), 3: ('c', 30)}**  **>>> d1[len(d1)+1]=[('d',40)]**  **>>> d1**  **{1: ('a', 10), 2: ('b', 20), 3: ('c', 30), 4: [('d', 40)]}**  **>>>**  output:  **adding a new entry to phone book**  **after adding**  **{1: ('Rashma', 8105731555, 'rashma@gmail.com', 'bangalore'), 2: ('Saritha', 9582161900, 'saritha@gmail.com', 'Mangalore'), 3: ('Bharathi', 9276895311, 'bharathi@yahoo.com', 'Koimbatore'), 4: ('deepthi', 8976885553, 'deepthi@gmail.com', 'bangalore'), 5: ('kakoli', 8816121598, 'kakili@gmail.com', 'dispur'),**  **6: [('sreenath', 9872345670, 'sreenath@pes.edu', 'kolar')]}**  # ii) Delete an entry based on the key entered by user  >>> key=int(input())  2  Hint:  if key in d1:  del d1[key]  else:  print("Key not found")  print("after deletion of key , d1 is",d1)    **output:**  **enter key between to be deleted1**  **after deletion of key 1 is**  **{2: ('Saritha', 9582161900, 'saritha@gmail.com', 'Mangalore'), 3: ('Bharathi', 9276895311, 'bharathi@yahoo.com', 'Koimbatore'), 4: ('deepthi', 8976885553, 'deepthi@gmail.com', 'bangalore'), 5: [('sreenath', 9872345670, 'sreenath@pes.edu', 'kolar')]}** |
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| Program 3 | Given list of students, marks for phy,chem,maths and biology form a dictionary where key is SRN and values is dictionary containing PCMB marks of respective student. |
|  | srns = ["PECS001","PECS015","PECS065","PECS035","PECS038"]  p\_marks = [98,99,85,92,79]  c\_marks = [91,90,84,98,99]  m\_marks = [78,39,60,50,84]  b\_marks = [95,59,78,80,89]  stu\_mar={}  mar\_det={}  **Output:**  **Obtained dictionary is:**  **{'PECS001': {'phy': 79, 'chem': 99, 'mat': 84, 'Bio': 84}, 'PECS015': {'phy': 79, 'chem': 99, 'mat': 84, 'Bio': 84}, 'PECS065': {'phy': 79, 'chem': 99, 'mat': 84, 'Bio': 84}, 'PECS035': {'phy': 79, 'chem': 99, 'mat': 84, 'Bio': 84}, 'PECS038': {'phy': 79, 'chem': 99, 'mat': 84, 'Bio': 84}}** |
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| Program 4 | a)Read movie data from mov1.csv file. CSV file mov1.csv has three columns c1 has year,c2 has rating,c3 has movie name.  b) write the year of release and movie name from mov1.csv to a text file |
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| Program 5 | From file mov1.csv make a dictionary with Key as year and values as name of movies released in that year. |
|  | **output:**  **{'1968': ['Greetings'], '1970': ['Hi'], '1973': ['Mean Streets'], '1974': ['The Godfather'], '1976': ['Taxi Driver'], '1977': ['New York'], '1980': ['Raging Bull'], '1983': ['The King of Comedy'], '1984': ['Falling in Love'], '1986': ['The Mission'], '1987': ['The Untouchables'], '1988': ['Midnight Run'], '1989': ["We're No Angels"], '1990': ['Stanley & Iris'], '1991': ['Guilty by Suspicion', 'Cape Fear'], '1992': ['Thunderheart'], '1993': ['A Bronx Tale', "This Boy's Life"], '1995': ['Casino'], '1996': ["Marvin's Room", 'Sleepers'], '1997': ['Jackie Brown'], '1998': ['Ronin'], '1999': ['Analyze This'], '2000': ['Men of Honor', 'The Adventures of Rocky & Bullwinkle'], '2001': ['15 Minutes'], '2002': ['Analyze That'], '2004': ['Shark Tale'], '2005': ['Hide and Seek', 'The Bridge of San Luis Rey'], '2007': ['Arthur and the Invisibles'], '2008': ['Righteous Kill'], '2009': ["Everybody's Fine"], '2010': ['Little Fockers'], '2011': ['Limitless', 'Killer Elite'], '2012': ['Being Flynn'], '2013': ['Grudge Match', 'Last Vegas'], '2014': ['The Bag Man'], '2015': ['Heist'], '2016': ['Dirty Grandpa']}** |
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| Program 6 | In the given dictionary find total marks and percentage  **{'PECS001': {'phy': 79, 'chem': 99, 'mat': 84, 'Bio': 84}, 'PECS015': {'phy': 79, 'chem': 99, 'mat': 84, 'Bio': 84}, 'PECS065': {'phy': 79, 'chem': 99, 'mat': 84, 'Bio': 84}, 'PECS035': {'phy': 79, 'chem': 99, 'mat': 84, 'Bio': 84}, 'PECS038': {'phy': 79, 'chem': 99, 'mat': 84, 'Bio': 84}}** |
|  | Stu\_marks={'PECS001': {'phy': 79, 'chem': 99, 'mat': 84, 'Bio': 84},  'PECS015': {'phy': 79, 'chem': 99, 'mat': 84, 'Bio': 84},  'PECS065':{'phy': 79, 'chem': 99, 'mat': 84, 'Bio': 84},  'PECS035': {'phy': 79, 'chem': 99, 'mat': 84, 'Bio': 84},  'PECS038': {'phy': 79, 'chem': 99, 'mat': 84, 'Bio': 84}}  print("detailed marks \n",Stu\_marks,"\n")  d=dict()  Score\_card={}  for srn,marks in Stu\_marks.items():  **d[‘total’]=sum(marks.value())**  **d[‘percent’]=d[‘total’]/4**  **Score\_card[srn]=d**  **print(Score\_card)**  **output:**  **{'PECS001': {'Total': 346, 'Percentage': 86.5}, 'PECS015': {'Total': 346, 'Percentage': 86.5}, 'PECS065': {'Total': 346, 'Percentage': 86.5}, 'PECS035': {'Total': 346, 'Percentage': 86.5}, 'PECS038': {'Total': 346, 'Percentage': 86.5}}** |
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