

Question 1:

A- define a list that contain the name of graduated student “5 student at least”:

```
In [2]: stu = ['mhran ali' , 'ali ali' , 'bero ali' , 'nour ali' , 'maher ali']
x = input("enter student name")

if (x in stu):
    print ('grad')
else:
    print('not grad')

enter student namen
not grad
```

B- Generate and print a list of odd numbers from 1 to 1000

```
In [3]: odd_num = [i for i in range(1,1001,2)]
print(odd_num)

[1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 73, 75, 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99, 101, 103, 105, 107, 109, 111, 113, 115, 117, 119, 121, 123, 125, 127, 129, 131, 133, 135, 137, 139, 141, 143, 145, 147, 149, 151, 153, 155, 157, 159, 161, 163, 165, 167, 169, 171, 173, 175, 177, 179, 181, 183, 185, 187, 189, 191, 193, 195, 197, 199, 201, 203, 205, 207, 209, 211, 213, 215, 217, 219, 221, 223, 225, 227, 229, 231, 233, 235, 237, 239, 241, 243, 245, 247, 249, 251, 253, 255, 257, 259, 261, 263, 265, 267, 269, 271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291, 293, 295, 297, 299, 301, 303, 305, 307, 309, 311, 313, 315, 317, 319, 321, 323, 325, 327, 329, 331, 333, 335, 337, 339, 341, 343, 345, 347, 349, 351, 353, 355, 357, 359, 361, 363, 365, 367, 369, 371, 373, 375, 377, 379, 381, 383, 385, 387, 389, 391, 393, 395, 397, 399, 401, 403, 405, 407, 409, 411, 413, 415, 417, 419, 421, 423, 425, 427, 429, 431, 433, 435, 437, 439, 441, 443, 445, 447, 449, 451, 453, 455, 457, 459, 461, 463, 465, 467, 469, 471, 473, 475, 477, 479, 481, 483, 485, 487, 489, 491, 493, 495, 497, 499, 501, 503, 505, 507, 509, 511, 513, 515, 517, 519, 521, 523, 525, 527, 529, 531, 533, 535, 537, 539, 541, 543, 545, 547, 549, 551, 553, 555, 557, 559, 561, 563, 565, 567, 569, 571, 573, 575, 577, 579, 581, 583, 585, 587, 589, 591, 593, 595, 597, 599, 601, 603, 605, 607, 609, 611, 613, 615, 617, 619, 621, 623, 625, 627, 629, 631, 633, 635, 637, 639, 641, 643, 645, 647, 649, 651, 653, 655, 657, 659, 661, 663, 665, 667, 669, 671, 673, 675, 677, 679, 681, 683, 685, 687, 689, 691, 693, 695, 697, 699, 701, 703, 705, 707, 709, 711, 713, 715, 717, 719, 721, 723, 725, 727, 729, 731, 733, 735, 737, 739, 741, 743, 745, 747, 749, 751, 753, 755, 757, 759, 761, 763, 765, 767, 769, 771, 773, 775, 777, 779, 781, 783, 785, 787, 789, 791, 793, 795, 797, 799, 801, 803, 805, 807, 809, 811, 813, 815, 817, 819, 821, 823, 825, 827, 829, 831, 833, 835, 837, 839, 841, 843, 845, 847, 849, 851, 853, 855, 857, 859, 861, 863, 865, 867, 869, 871, 873, 875, 877, 879, 881, 883, 885, 887, 889, 891, 893, 895, 897, 899, 901, 903, 905, 907, 909, 911, 913, 915, 917, 919, 921, 923, 925, 927, 929, 931, 933, 935, 937, 939, 941, 943, 945, 947, 949, 951, 953, 955, 957, 959, 961, 963, 965, 967, 969, 971, 973, 975, 977, 979, 981, 983, 985, 987, 989, 991, 993, 995, 997, 999]
```

C- L=["network","programming","physics","music"] in this exercise you will implement a python program that reads the items of the previous list and identifies the items that start with p letter.

```
In [6]: l = ['network' , 'programming' , 'math' , 'physical' , 'music']
list = []
for i in range (len(l)):
    if l[i][0] == 'p':
        list.append(l[i])
print(list)

['programming', 'physical']
```

D- using dictionary comprehension , generate this dictionary
d={1:1,2:4,3:9,4:16,5:25,6:36,7:49,8:64,9:81,10:100}

```
In [9]: d = {}
for i in range(1,11):
    d[i] = i**2
print(d)

{1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64, 9: 81, 10: 100}
```

Question 2:

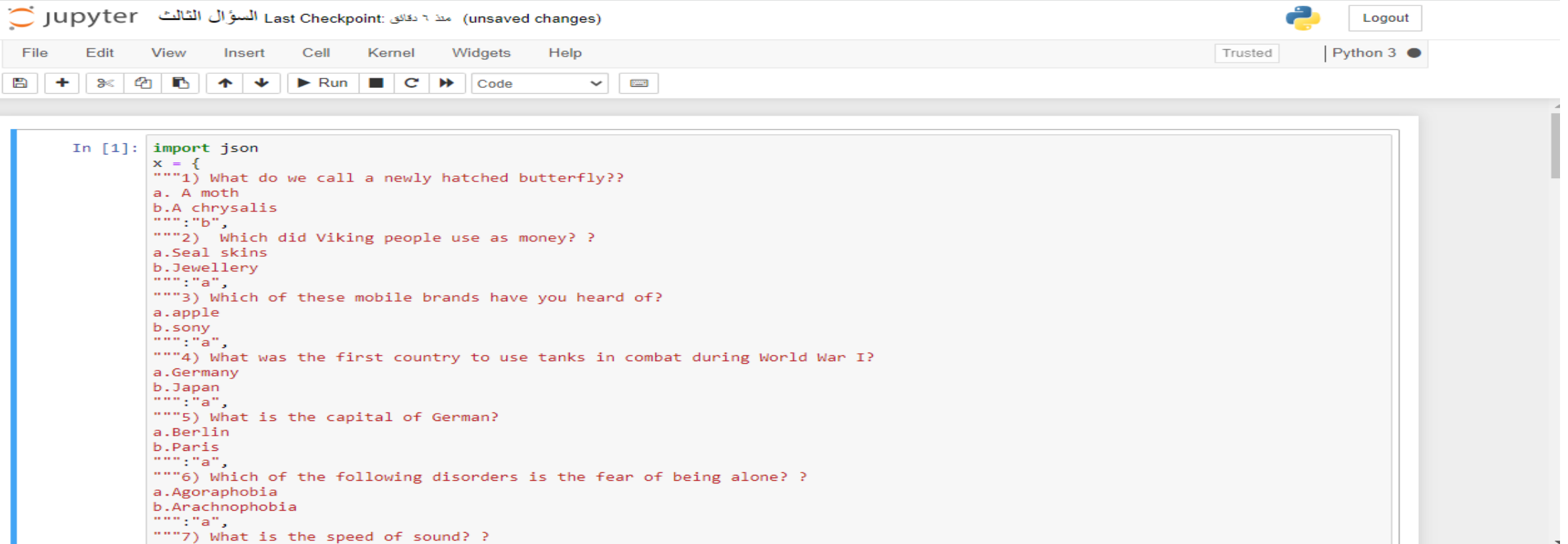
Write a python program that convert a decimal number into its equivalent binary number

```
In [12]: num = int(input("enter a number :"))
a = []
while(num>0):
    d = num%2
    a.append(d)
    num = num//2
a.reverse()
print("the binary format is:")
for i in a:
    print(i , end="")
```

```
enter a number :10
the binary format is:
1010
```

Question 3:

Type python quiz program that takes a text or json file as input for (20(question , answer)), it asks the questions and finally computes and print users results and store user name and results in separate file.



The image shows a Jupyter Notebook interface. The top bar includes the Jupyter logo, the text "السؤال الثالث" (Question 3), "Last Checkpoint: منذ ٦ دقائق" (Last Checkpoint: 6 minutes ago), and "(unsaved changes)". On the right, there is a Python logo and a "Logout" button. Below the top bar is a menu bar with "File", "Edit", "View", "Insert", "Cell", "Kernel", "Widgets", and "Help". To the right of the menu bar are "Trusted" and "Python 3" indicators. Below the menu bar is a toolbar with icons for file operations, running, and other notebook functions. The main area of the notebook contains a code cell with the following Python code:

```
In [1]: import json
x = {
    """1) What do we call a newly hatched butterfly??
    a. A moth
    b.A chrysalis
    """: "b",
    """2) Which did Viking people use as money? ?
    a.Seal skins
    b.Jewellery
    """: "a",
    """3) Which of these mobile brands have you heard of?
    a.apple
    b.sony
    """: "a",
    """4) What was the first country to use tanks in combat during World War I?
    a.Germany
    b.Japan
    """: "a",
    """5) What is the capital of German?
    a.Berlin
    b.Paris
    """: "a",
    """6) Which of the following disorders is the fear of being alone? ?
    a.Agoraphobia
    b.Arachnophobia
    """: "a",
    """7) What is the speed of sound? ?
```



```
""": "a",
""": "6) Which of the following disorders is the fear of being alone? ?
a.Agoraphobia
b.Arachnophobia
""": "a",
""": "7) What is the speed of sound? ?
a. 1,200 km/h
b.700 km/h
""": "a",
""": "8) Which of the following is a song by the German heavy metal band "Scorpions"?
a.Wind of Change
b.Hey Jude
""": "a",
""": "9)Which is the easiest way to tell the age of many trees??
a.To measure the width of the tree
b.To count the number of leaves
""": "a",
""": "10) What is the capital of Egypt ?
a.Cairo
b.Paris
""": "a",
""": "11) Goulash is a type of beef soup in which country ?
a.Slovakia
b.Hungary
""": "b",
""": "12) What is the main component of the sun ?
a. Gas
b.Molten iron
""": "b",
""": "13) Which two months are named after Emperors of the Roman Empire ?
```

```

""": "b",
    """: 13) Which two months are named after Emperors of the Roman Empire ?
a. May and June
b. March and April
""": "a",

""": 14) Which of the following animals can run the fastest?
a. dog
b. Cheetah
""": "b", }
bb = json.dumps(x)
with open("bb.json", "w") as f:
    f.write(bb)

```

```

In [*]: import json
x1 = 0
x2 = {}
x3 = []
name = input(" name :")
with open("bb.json", "r") as f:
    bb = json.loads(f.read())
    for i in bb :
        print(i)
        a1 = input("enter a or b :")
        x3.append(a1)
        if a1 == bb[i]:
            x1 = x1+1
        else:
            x1 = x1-1

```

```

x1 = 0
x2 = {}
x3 = []
name = input(" name :")
with open("bb.json","r") as f:
    bb = json.loads(f.read())
    for i in bb :
        print(i)
        a1 = input("enter a or b :")
        x3.append(a1)
        if a1 == bb[i]:
            x1 = x1+1
        else:
            x1 = x1-1

    x2 ={name:x3}
    print(x2)

print("The result :",x1)

```

name :mhran

1) What do we call a newly hatched butterfly??

- a. A moth
- b.A chrysalis

enter a or b :a

2) Which did Viking people use as money? ?

- a.Seal skins
- b.Jewellery

enter a or b :a

2) Which did Viking people use as money? ?

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enter a or b :a

3) Which of these mobile brands have you heard of?

a.apple

b.sony

enter a or b :a

4) What was the first country to use tanks in combat during World War I?

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b.Japan

enter a or b :a

5) What is the capital of German?

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6) Which of the following disorders is the fear of being alone? ?

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7) What is the speed of sound? ?

a. 1,200 km/h

b.700 km/h

enter a or b :a

enter a or b :a

8) Which of the following is a song by the German heavy metal band "Scorpions"?

a.Wind of Change

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9)Which is the easiest way to tell the age of many trees??

a.To measure the width of the tree

b.To count the number of leaves

enter a or b :a

10) What is the capital of Egypt ?

a.Cairo

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enter a or b :a

11) Goulash is a type of beef soup in which country ?

a.Slovakia

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enter a or b :a

12) What is the main component of the sun ?

a. Gas

b.Molten iron

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13) Which two months are named after Emperors of the Roman Empire ?

a.May and June

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