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1  """
2  CS241 Homework 11
3  Written by Chad Macbeth
4  """
5
6  """
7  Purpose: This file is a starting point to help you practice list comprehensions.
8  """
9
10 def get_part1_list():
11     """
12     Returns a list of the squares of the numbers [0-99], e.g., 0, 1, 4, 9, 16, 25 ...]
13     """
14     numbers = [i**2 for i in range(100)]
15
16     return numbers
17
18 def get_part2_list():
19     """
20     Returns a list of the the numbers [0-99] that are divisible by either 5 or 7
21     """
22     numbers = [i for i in range(100) if i%5 == 0 or i%7 == 0]
23
24     return numbers
25
26 def get_part3_list():
27     """
28     Filters a list of words to return only those that are at least 4 letters long and
29     contain an 'e'
30     """
31     old_words = ["tacos", "knowledge", "water", "on", "the", "I", "is", "hilarious",
32     "tie", "coat", "white", "covenants", "phone", "rubric", "send", "restrictions"]
33
34     new_words = [word for word in old_words if len(word) >= 4 and 'e' in word]
35
36     return new_words
37
38 def main():
39     """
40     This function calls the above functions and displays their result.
41     """
42     print(get_part1_list())
43     print(get_part2_list())
44     print(get_part3_list())
45
46 if __name__ == "__main__":
47     main()

```