4.a) Explain your ROM for mapping 5-bit binary to 2-digit BCDs (or 2x8 bits seven segment displays depending on your design in Exercise.2).

I write a python code as following.

```python
data = []

for i in range(32):
    data.append(format(i // 10, '04b') + format(i % 10, '04b'))

with open("ROM.mem", "w") as txt_file:
    for line in data:
        txt_file.write(line + "\n")
```

This script will generate text file with 32 lines, each line of ROM will consist of 4bits(first digit) + 4bits(second digit). To get each digit, I use "//" and "%" and convert them to binary with length of 4 and combine them together.