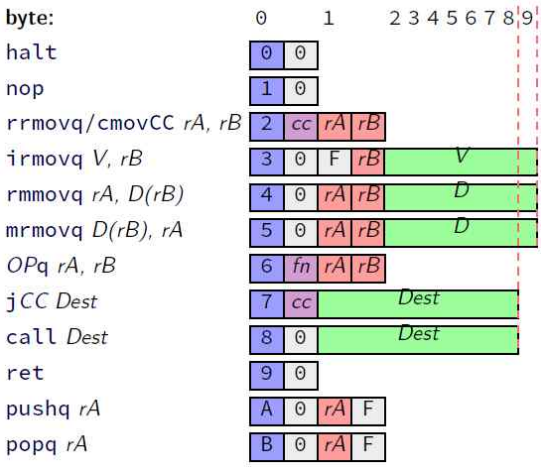
HW1. Y86-64 Encoding and Decoding

due: 2019.09.30.

Please write the answers for the following questions. Students should provide detailed explanations for the answers.



1. Y86-64 encoding (20 points)

Convert the following Y86-64 assembly codes into binaries. Refer to the Y86-64 specification from the above figure and our textbook.

```
irmovq $1, %rax
addq %rdi, %rax
ret
```

2. Y86-64 encoding (20 points)

Convert the following Y86-64 assembly codes into binaries. Refer to the Y86-64 specification from the above figure and our textbook.

```
comeOn:          /* suppose at address 0x123 */
      addq %rax, %rax
      jge comeOn
```

3. Y86-64 decoding (60 points)

Convert the following object codes (binaries) into the corresponding Y86-64 assembly codes. Refer to the Y86-64 specification from the above figure and our textbook.

```
20 10 60 20 61 37 72 84 00 00 00 00 00 00 00 00
20 12 20 01 70 68 00 00 00 00 00 00 00 00
```