

# Challenge-6

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## Questions

**Question-1: Countdown Blastoff (While Loop)** Create a program that simulates a rocket launch countdown using a while loop. Start from 10 and countdown to “Blastoff!” with a one-second delay between each countdown number. Print a message when the rocket launches.

**Hint:** You may want to use `cat` command to print the countdown and `Sys.sleep` for incorporating the delay

**Output preview:** Here is how the countdown could look like

**Solutions:**

```
countdown <- 10

while (countdown >= 1) {
  cat(countdown, "...")
  Sys.sleep(1)
  countdown <- countdown - 1
}
```

```
## 10 ...9 ...8 ...7 ...6 ...5 ...4 ...3 ...2 ...1 ...
```

```
cat("Blastoff!")
```

```
## Blastoff!
```

**Question-2: Word Reverser (for Loop)** Develop a program that takes a user-entered word and uses a while loop to print the word’s characters in reverse order. For example, if the user enters “hello,” the program should print “olleh.”

**Hint:** You may want to use `substr` command to access each character of the input word, and `paste` command to join the reversed letters one at a time

**Solutions:**

```
word <- readline(prompt = "Enter a word: ")
```

```
## Enter a word:
```

```
reversed_word <- ""  
  
for (i in nchar(word):1) {  
  reversed_word <- paste(reversed_word, substr(word, i, i), sep = "")  
}  
  
cat("Reversed word:", reversed_word, "\n")
```

## Reversed word: