

# 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:**

```
# Enter code here

rocket_countdown <- function() {
  countdown <- 10

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

  cat("Blastoff!\n")
}

rocket_countdown()
```

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

*# Enter code here*

```
reverse_word <- function() {  
  word <- readline("Enter a word: ")  
  length_word <- nchar(word)  
  reversed_word <- ""  
  
  while (length_word > 0) {  
    reversed_word <- paste(reversed_word, substr(word, length_word, length_word), sep  
= "")  
    length_word <- length_word - 1  
  }  
  
  cat("Reversed word:", reversed_word, "\n")  
}  
  
reverse_word()
```

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