

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
countdown <- function(start) {
  while (start > 0) {
    cat(start, "\n")
    start <- start - 1
    Sys.sleep(1)
  }
  cat("Blastoff!\n")
}
countdown(10)
```

```
## 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) {
  length_word <- nchar(word)

  for (i in length_word:1) {
    cat(substr(word, i, i))
  }
  cat("\n")
}

user_input <- readline("Enter a word: ")
```

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

```
reverse_word(user_input)
```