

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 <- 10

while (countdown >= 1) {
  cat(countdown, "\n")
  Sys.sleep(1) # Pause for one second
  countdown <- countdown - 1
}
```

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

```
cat("Blastoff! 🚀\n")
```

```
## 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
word <- "heloofd"

length_of_word <- nchar(word)

i <- length_of_word

reversed_word <- ""

while (i >= 1) {
  character <- substr(word, i, i)

  reversed_word <- paste(reversed_word, character, sep = "")

  i <- i - 1
}

cat("Reversed word:", reversed_word, "\n")
```

```
## Reversed word: dfooleh
```