

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_to_blastoff <- function() {
  countdown <- 10

  while (countdown > 0) {
    cat(countdown, "... ", sep = "")
    Sys.sleep(1)
    countdown <- countdown - 1
  }

  cat("Blastoff!\n")
}

countdown_to_blastoff()
```

```
## 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_and_print_word <- function() {  
  
  word <- readline(prompt = "Enter a word: ")  
  
  reversed_word <- ""  
  word_length <- nchar(word)  
  i <- word_length  
  
  while (i > 0) {  
  
    letter <- substr(word, i, i)  
  
    reversed_word <- paste(reversed_word, letter, sep = "")  
  
    i <- i - 1  
  }  
  
  cat("Reversed word: ", reversed_word, "\n")  
}  
  
reverse_and_print_word()
```

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