

Challenge-6

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```
knitr::opts_chunk$set(echo = TRUE)
```

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

Solutions:

```
# Creating a function for countdown
rocket_countdown <- function() {
  countdown <- 10
  while(countdown>0) {
    cat(countdown, "...", "")
    countdown <- countdown - 1
    Sys.sleep(1)
  }
  cat("Blast off!")
}

rocket_countdown()
```

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

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_reverser <- function() {
  user_input <- readline("Enter your word here:")
  reversed_word <- ""
  for (i in nchar(user_input):1) {
```

```
    reversed_word <- paste(reversed_word, substr(user_input,i,i),sep="")
  }
  cat("This is your reversed word:",reversed_word)
}
Word_reverser()
```

Enter your word here:

This is your reversed word:

Thank you! Have a wonderful recess week!