

## 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

**Solutions:**

```
# Enter code here
count <- 10
while (count > 0) {
  cat(count)
  cat("...")
  Sys.sleep(1)
  count = count - 1
}
```

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

```
cat("Blastoff!")
```

```
## 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
x <- c("hello")
y <- nchar(x)
substr(x,1,y)
```

```
## [1] "hello"
```

```
a<-c()
while (y>0) {
  a <- c(a, substr(x, y, y))
  y=y-1
}
paste (a, sep = " ", collapse = "", recycle0 = FALSE)
```

```
## [1] "olleh"
```