



## Problem Statement

In this assignment you will demonstrate your skills at scraping a webpage using any scraping tool of your own choice

Select any problem then choose any website from where you can scrape a relevant dataset in accordance with that problem.

## Significance

This assignment is there to teach us the importance of data collection which is an important part of the data mining process. Without data, there's nothing to process and hence, no useful knowledge or pattern can be extracted from it.

In some cases, the dataset is already available but in most cases, the data has to be collected from different sources. One way to collect data from online sources is to scrape websites and other online resources. This assignment teaches us how to do that.

## Chosen website and why

The website I chose for this assignment is Computer Zone and the data that I have scraped from this website is of all the computer mouse listed on the website. This data can be used to check what kind of computer mouse are most in-demand and most liked by consumers. This data can also be used to compare the features/reviews/prices of different categories and brands of mouse.

## Code

```
import scrapy

class MouseScraper(scrapy.Spider):
    name = 'mouse'
    start_urls = ['https://www.czone.com.pk/mouse-pakistan-ppt.95.aspx']
    allowed_domains = ['czone.com.pk']

    def parse(self, response):
        base_url = 'https://www.czone.com.pk'

        for item in response.css('div.product'):
            productInfo = item.css('div.col-lg-8.col-md-8.col-sm-8.col-xs-12.no-padding')
            productName = productInfo.css('a::text').get()
            link = base_url + productInfo.css("a::attr('href')").get()

            stockInfo = item.css('div.product-stock')
            stockInfo = stockInfo.css('span::text').getall()
            stock = stockInfo[1]

            priceInfo = item.css('div.price')
```

```
yield {
  'productName': productName,
  'link': link,
  'stock': stock,
  'price': price
}
```

```
yield response.follow(nextpg, callback=self.parse)
```

```
Open  mouse-csv  Save  |
1 productname,lnk,stock_price
2 Havit HV-N5753 Optical Mouse,https://www.czcone.com.pk/mouse-havit-havit-hv-n5753-optical-mouse-pakistan-p.12343.aspx,Out of Stock,Rs.500
3 Rapoo N108 Wired Ambidextrous Mouse,https://www.czcone.com.pk/mouse-rapoo-mouse-rapoo-n108-wired-ambidextrous-mouse-pakistan-p.12842.aspx,Out of Stock,Rs.650
4 Logitech B100 Optical USB Mouse,https://www.czcone.com.pk/mouse-logitech-logitech-b100-optical-usb-mouse-pakistan-p.1117.aspx,In Stock,Rs.750
5 A4tech CP-3395 Wired USB Mouse,https://www.czcone.com.pk/mouse-a4-tech-mouse-a4tech-cp-3395-wired-usb-mouse-pakistan-p.12947.aspx,In Stock,Rs.750
6 Logitech N108 Wireless Mouse - Grey,https://www.czcone.com.pk/mouse-logitech-logitech-n108-usb-mouse-pakistan-p.1255.aspx,Out of Stock,Rs.800
7 Logitech FM12 Fstyler 1200 DPI Optical Mouse - Black,https://www.czcone.com.pk/mouse-a4-tech-mouse-a4tech-fm12-fstyler-1200-dpi-optical-mouse-pakistan-p.11862.aspx,In Stock,Rs.850
8 A4tech FM12 Fstyler 1200 DPI Optical Mouse - Black,https://www.czcone.com.pk/mouse-a4-tech-mouse-a4tech-fm12-fstyler-1200-dpi-optical-mouse-pakistan-p.11472.aspx,Out of Stock,Rs.850
9 Logitech M108R Wired USB Mouse Dark Black 910-085085,https://www.czcone.com.pk/mouse-logitech-logitech-m108r-wired-usb-mouse-dark-black-910-085085-pakistan-p.10446.aspx,In Stock,Rs.1,250
10 A4tech N-500F5 Silent Mouse | Glossy Grey,https://www.czcone.com.pk/mouse-a4-tech-mouse-a4tech-n-500f5-wired-silent-mouse-glossy-grey-pakistan-p.11909.aspx,In Stock,Rs.1,250
11 A4tech Fstyler FM105 1600 DPI Optical Mouse | Grey,https://www.czcone.com.pk/mouse-a4-tech-mouse-a4tech-fstyler-fm105-1600-dpi-optical-mouse-grey-pakistan-p.11916.aspx,In Stock,Rs.1,300
12 A4tech FM12 Fstyler 1200 DPI Optical Mouse - Silent Click,https://www.czcone.com.pk/mouse-a4-tech-mouse-a4tech-fm12-fstyler-1200-dpi-optical-mouse-pakistan-p.13069.aspx,Out of Stock,Rs.1,400
13 A4tech Fstyler FG125 Panda 1200 DPI Optical Wireless Mouse,https://www.czcone.com.pk/mouse-a4-tech-mouse-a4tech-fstyler-fg125-panda-1200-dpi-optical-wireless-mouse-pakistan-p.11910.aspx,Out of Stock,Rs.1,600
14 A4tech FG-400MS Wireless Mouse | Glossy Grey,https://www.czcone.com.pk/mouse-a4-tech-mouse-a4tech-fg-400ms-wireless-mouse-glossy-grey-pakistan-p.11977.aspx,In Stock,Rs.1,600
15 Havit MS1008 RGB Backlit Optical Gaming Mouse | Black,https://www.czcone.com.pk/mouse-havit-havit-hv-ms1008-rgb-backlit-optical-gaming-mouse-black-pakistan-p.12331.aspx,Out of Stock,Rs.1,650
16 A4tech Fstyler FG105 2.4C Wireless Mouse - Grey,https://www.czcone.com.pk/mouse-a4-tech-mouse-a4tech-fstyler-fg105-2-4g-wireless-mouse-grey-pakistan-p.13478.aspx,In Stock,Rs.1,700
17 A4tech Fstyler FG105 2.4C Wireless Mouse - White,https://www.czcone.com.pk/mouse-a4-tech-mouse-a4tech-fstyler-fg105-2-4g-wireless-mouse-white-pakistan-p.13476.aspx,Out of Stock,Rs.1,750
18 A4tech Fstyler FG105 2.4C Wireless Mouse - Red | Black,https://www.czcone.com.pk/mouse-a4-tech-mouse-a4tech-fstyler-fg105-2-4g-wireless-mouse-red-black-pakistan-p.13477.aspx,In Stock,Rs.1,750
19 A4tech Fstyler FG20 Wireless Mouse (Pink),https://www.czcone.com.pk/mouse-a4-tech-mouse-a4tech-fstyler-fg20-wireless-mouse-pink-pakistan-p.13474.aspx,In Stock,Rs.1,870
20 A4tech FB125 Dual Mode Wireless Mouse | Black,https://www.czcone.com.pk/mouse-a4-tech-mouse-a4tech-fb125-dual-mode-wireless-mouse-black-pakistan-p.12372.aspx,In Stock,Rs.1,920
21 Logitech B175 Plug-and-play Wireless Plus Comfort Mouse - Black - 910-082635,https://www.czcone.com.pk/mouse-logitech-logitech-b175-plug-and-play-wireless-plus-comfort-mouse-black-910-082635-pakistan-p.12329.aspx,Out of Stock,Rs.1,950
22 A4tech Fstyler FG205 Silent Click Wireless Mouse (White),https://www.czcone.com.pk/mouse-a4-tech-mouse-a4tech-fstyler-fg205-silent-click-wireless-mouse-white-pakistan-p.13473.aspx,In Stock,Rs.1,950
23 A4tech Fstyler FG205 Silent Click Wireless Mouse (Grey),https://www.czcone.com.pk/mouse-a4-tech-mouse-a4tech-fstyler-fg205-silent-click-wireless-mouse-grey-pakistan-p.13475.aspx,In Stock,Rs.1,950
24 A4tech FG305 Fstyler 2.4C Wireless Mouse (Grey),https://www.czcone.com.pk/mouse-a4-tech-mouse-a4tech-fg305-fstyler-2-4g-wireless-mouse-grey-pakistan-p.9336.aspx,In Stock,Rs.1,950
25 Rapoo V16 Gaming Optical Mouse,https://www.czcone.com.pk/mouse-rapoo-mouse-rapoo-v16-gaming-optical-mouse-pakistan-p.12838.aspx,In Stock,Rs.1,980
26 Logitech M170 Wireless Mouse - Grey Black 910-084656,https://www.czcone.com.pk/mouse-logitech-logitech-m170-wireless-mouse-grey-black-910-084656-pakistan-p.13425.aspx,Out of Stock,Rs.2,000
27 Redragon M190 Full-Size Wireless Mouse - M860,https://www.czcone.com.pk/mouse-logitech-logitech-m190-full-size-wireless-mouse-red-pakistan-p.11091.aspx,Out of Stock,Rs.2,100
28 Logitech M190 Full-Size Wireless Mouse - Red,https://www.czcone.com.pk/mouse-logitech-logitech-m190-full-size-wireless-mouse-red-pakistan-p.11091.aspx,Out of Stock,Rs.2,100
29 Logitech M190 Full-Size Wireless Mouse - Blue,https://www.czcone.com.pk/mouse-logitech-logitech-m190-full-size-wireless-mouse-blue-pakistan-p.11090.aspx,Out of Stock,Rs.2,100
30 Logitech M171 Wireless Mouse - Blue/Black - 910-084656,https://www.czcone.com.pk/mouse-logitech-logitech-m171-wireless-mouse-blue-black-910-084656-pakistan-p.5135.aspx,In Stock,Rs.2,100
31 Redragon PHASER M609 Gaming Mouse,https://www.czcone.com.pk/mouse-redragon-redragon-phaser-m609-gaming-mouse-pakistan-p.7143.aspx,Out of Stock,Rs.2,150
32 Logitech Raptor M190 Full-Size Wireless Mouse - Mid Grey,https://www.czcone.com.pk/mouse-logitech-logitech-raptor-m190-full-size-wireless-mouse-mid-grey-pakistan-p.13075.aspx,Out of Stock,Rs.2,190
33 Logitech M190 Full-Size Wireless Mouse - Mid Grey,https://www.czcone.com.pk/mouse-logitech-logitech-m190-full-size-wireless-mouse-mid-grey-pakistan-p.11089.aspx,Out of Stock,Rs.2,200
34 T-Dagger T-TGN203 Warrant Officer Wired Gaming Mouse,https://www.czcone.com.pk/mouse-t-dagger-t-dagger-t-tgn203-warrant-officer-wired-gaming-mouse-pakistan-p.7931.aspx,In Stock,Rs.2,250
35 Redragon Gatner M610 Wired USB Gaming Mouse (Black), 3200 DPI,https://www.czcone.com.pk/mouse-redragon-redragon-gatner-m610-wired-usb-gaming-mouse-black-3200-dpi-pakistan-p.7412.aspx,Out of Stock,Rs.2,290
36 Logitech Wireless Mouse M185 - Red | Black,https://www.czcone.com.pk/mouse-logitech-logitech-wireless-mouse-m185-red-black-pakistan-p.3572.aspx,In Stock,Rs.2,300
37 Logitech Wireless Mouse M185 - Blue,https://www.czcone.com.pk/mouse-logitech-logitech-wireless-mouse-m185-blue-pakistan-p.3573.aspx,Out of Stock,Rs.2,300
38 Logitech Wireless Mouse M185 - Grey - 910-082255,https://www.czcone.com.pk/mouse-logitech-logitech-wireless-mouse-m185-grey-910-082255-pakistan-p.894.aspx,In Stock,Rs.2,300
39 Havit Gamenote MS1012A RGB Backlit Programmable Software Gaming Mouse,https://www.czcone.com.pk/mouse-havit-havit-gamenote-ms1012a-rgb-backlit-programmable-software-gaming-mouse-pakistan-p.12329.aspx,In Stock,Rs.2,400
40 Redragon Tiger T709 - Red LED Gaming Mouse,https://www.czcone.com.pk/mouse-redragon-redragon-tiger-t709-red-led-gaming-mouse-pakistan-p.11189.aspx,In Stock,Rs.2,460
41 Logitech Captain Jack T-4090T Gaming Mouse,https://www.czcone.com.pk/mouse-logitech-logitech-captain-jack-t-4090t-gaming-mouse-pakistan-p.12421.aspx,In Stock,Rs.2,460
42 Logitech N191 Wireless Mouse Mid Grey (910-083937),https://www.czcone.com.pk/mouse-logitech-logitech-n191-wireless-mouse-mid-grey-910-083937-pakistan-p.13363.aspx,In Stock,Rs.2,500
43 Logitech R235 Wireless Mouse Red - 910-083412,https://www.czcone.com.pk/mouse-logitech-logitech-r235-wireless-mouse-red-910-083412-pakistan-p.9494.aspx,Out of Stock,Rs.2,700
44 Logitech R235 Wireless Mouse - Steel Blue - 910-083932,https://www.czcone.com.pk/mouse-logitech-logitech-r235-wireless-mouse-steel-blue-910-083932-pakistan-p.1041.aspx,Out of Stock,Rs.2,700
45 Redragon Pegasus W705 7200 DPI Gaming Mouse (Black),https://www.czcone.com.pk/mouse-redragon-redragon-pegasus-w705-7200-dpi-gaming-mouse-black-pakistan-p.7414.aspx,In Stock,Rs.2,700
46 Logitech M221 Silent Wireless Mouse - Red - 910-084884,https://www.czcone.com.pk/mouse-logitech-logitech-m221-silent-wireless-mouse-red-910-084884-pakistan-p.5176.aspx,In Stock,Rs.2,800
47 Logitech M221 Silent Wireless Mouse - Blue,https://www.czcone.com.pk/mouse-logitech-logitech-m221-silent-wireless-mouse-blue-pakistan-p.5175.aspx,In Stock,Rs.2,800
48 Logitech M221 Silent Wireless Mouse - Charcoal,https://www.czcone.com.pk/mouse-logitech-logitech-m221-silent-wireless-mouse-charcoal-pakistan-p.5177.aspx,In Stock,Rs.2,800
49 A4tech FB35CS Dual Mode Rechargeable Silent Click Wireless Mouse | Icy White | FB35CS(S),https://www.czcone.com.pk/mouse-a4-tech-mouse-a4tech-fb35cs-dual-mode-rechargeable-silent-click-wireless-mouse-icy-white-fb35cs-pakistan-p.13048.aspx,In Stock,Rs.2,800
```

## Flowchart

