

PRACTICAL NO 3

AIM: Exploring data: View() or print() (R).

OUTPUT:

The first screenshot shows the RStudio interface with the following code in the Source pane:

```
R - R4.5.2 ~ / - /
> # Load your Amazon CSV (make sure the file name is correct)
> amazon <- read.csv("amazon.csv")
> # View the first few rows
> head(amazon)
  product_id
1 B07J9H4J1
2 B09BNS6PVG
3 B09M5W6CT
4 B08HDJ86NZ
5 B08CF3B7N1
6 B08Y1TFSP6

  product_name
1 Wayona Nylon Braided USB to Lightning Fast Charging and Data Sync Cable Compatible for iPhone 13, 12,11, X, 8, 7, 6, 5, iPad Air, Pro, Mini (3 FT Pack of 1, Grey)
2 Ambrane Unbreakable 60W / 3A Fast Charging 1.5m Braided Type C Cable for Smartphones, Tablets, Laptops & other Type C devices, PD Technology, 480Mbps Data Sync, Quick Charge 3.0 (RCT15A, Black)
3 Source Fast Phone Charging Cable & Data Sync Cable Compatible for iPhone 13, 12,11, X, 8, 7, 6, 5, iPad Air, Pro, Mini & 105 Devices
4 boAt Deuce USB 300 2 in 1 Type-C & Micro USB Stress Resistant, Tangle-Free, Sturdy Cable with 3A Fast Charging & 480Mbps Data Transmission, 10000+ Bends Lifespan and Extended 1.5m Length(Martian Red)
5 Portroni cs Connect L 1.2M Fast Charging 3A 8 Pin USB Cable with Charge & Sync Function for iPhone, iPad (Grey)
6 pTron Solero TB301 3A Type-C Data and Fast Charging Cable, Made in India, 480Mbps Data Sync, Strong and Durable 1.5-Meter Nylon Braided USB Cable for Type-C Devices for Charging Adapter (Black)

  category
1 Computers&Accessories|Accessories|Peripherals|Cables|Accessories|Cables|USBCables
2 Computers&Accessories|Accessories|Peripherals|Cables|Accessories|Cables|USBCables
3 Computers&Accessories|Accessories|Peripherals|Cables|Accessories|Cables|USBCables
4 Computers&Accessories|Accessories|Peripherals|Cables|Accessories|Cables|USBCables
5 Computers&Accessories|Accessories|Peripherals|Cables|Accessories|Cables|USBCables
6 Computers&Accessories|Accessories|Peripherals|Cables|Accessories|Cables|USBCables
discounted_price actual_price discount_percentage rating rating_count
1 ₹999 ₹1,099 64% 4.2 24,269
2 ₹199 ₹349 43% 4.0 43,994
3 ₹199 ₹1,899 90% 3.9 7,928
4 ₹329 ₹699 53% 4.2 94,363
5 ₹154 ₹399 61% 4.2 16,905
6 ₹149 ₹1,000 85% 3.9 24,871
```

The second screenshot shows the same RStudio interface with the following code in the Source pane:

```
R - R4.5.2 ~ / - /
> # View the last few rows
> tail(amazon)
  product_id
1460 B08J3JWG81
1461 B08L7J3T31
1462 B01M6453MB
1463 B009P2L1L4
1464 B00J5DYCCA
1465 B01486F4G6

  product_name
1460 NCI Store 2 Pieces Pet Hair Removers for Your Laundry Catcher Lint Remover for Washing Machine Lint Remover Reusable Portable Silica Gel Clothes Washer Dryer Floating Ball
1461 Noir Aqua - 5pcs PP Spun Filter + 1 Spanner | for All Types of RO Water Purifiers (3 Piece, White, 10 Inch, 5 Micron) - RO Spun Filter Cartridge Replacement Water Filter Candle
1462 Prestige Delight PRW0 Electric Rice Cooker (1 L, White)
1463 Bajaj Majesty RXL0 2000 Watts Heat Convector Room Heater (White, ISI Approved)
1464 Havells Ventil Air DSP 230mm Exhaust Fan (Pista Green)
1465 Borosil Jumbo 1000-Watt Grill Sandwich Maker (Black)

  category
1460 Home&Kitchen|Kitchen|HomeAppliances|Vacuum,Cleaning&Ironing|Irons,Steamers&Accessories|LintShavers
1461 Home&Kitchen|Kitchen|HomeAppliances|WaterPurifiers&Accessories|WaterPurifierAccessories
1462 Home&Kitchen|Kitchen|HomeAppliances|SmallKitchenAppliances|Rice&PastaCookers
1463 Home&Kitchen|Heating,Cooling&AirQuality|RoomHeaters|HeatConvector
1464 Home&Kitchen|Heating,Cooling&AirQuality|Fans|ExhaustFans
1465 Home&Kitchen|Kitchen|HomeAppliances|SmallKitchenAppliances|SandwichMakers

  discounted_price actual_price discount_percentage rating rating_count
1460 ₹199 ₹999 80% 3.1 2
1461 ₹379 ₹919 59% 4 1,090
1462 ₹2,280 ₹3,045 25% 4.1 4,118
1463 ₹2,219 ₹3,080 28% 3.6 468
1464 ₹1,399 ₹1,890 26% 4 8,031
```

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The screenshot displays the RStudio interface with the following components:

- Source Editor:** Contains R code for loading the 'amazon' dataset and performing a summary. The code includes comments in Hindi and English, and uses functions like `dim()`, `str()`, `summary()`, and `library(psych)`.
- Environment Pane:** Shows the loaded objects: 'amazon' (1465 obs. of 16 variables) and 'amazon_data' (1465 obs. of 16 variables).
- Files Pane:** Lists files in the project directory, including 'AIM.docx', 'amazon.csv', 'amazon.csv.zip', 'aniprject.sql', 'anti ragging.pdf', 'AVCLabs Video Enhancer AI', 'Blackmagic Design', 'bmi.csv', 'check.sql', 'CN.pdf', 'connection.sql', 'Custom Office Templates', 'dbase_db.sql', 'desktop.ini', 'Experience-Salary.csv', 'graph scala m2 1.py', 'heart.csv', and 'HINDI ANSWERS.docx'.
- Console:** Displays the output of the R commands, showing the dimensions of the dataset (1465 rows, 16 columns) and a detailed summary of the variables.

```
R> R452 - ~/ -  
File Edit Code View Plots Session Build Debug Profile Tools Help  
Go to file/function Addins  
Source  
R452 - ~/ -  
72923617&s=kitchen&sr=1-506  
> # Get the dimensions (rows and columns)  
> dim(amazon)  
[1] 1465 16  
> # Print dimensions in a clean format  
> cat("Dimensions (Rows, Columns): ", dim(amazon), "\n")  
Dimensions (Rows, Columns): 1465 16  
> # Get the structure (variable types and observations)  
> str(amazon)  
'data.frame': 1465 obs. of 16 variables:  
 $ product_id : chr "B07JW9H4J1" "B09NS6PVG" "B096MSW6CT" "B08HD386Z" ...  
 $ product_name : chr "Wayona Nylon Braided USB to Lightning Fast Charging and Data Sync Cab  
le Compatible for iPhone 13, 12, 11, X, 8, 7" "Ambrane Unbreakable 60W / 3A Fast Chargin  
g 1.5m Braided Type C Cable for Smartphones, Tablets, Laptops & other" "Source Fa  
st Phone Charging Cable & Data Sync USB Cable Compatible for iPhone 13, 12, 11, X, 8, 7, 6, 5, iPad  
Air" ...  
 $ category : chr "Computers&Accessories" "Accessories&Peripherals" "Cables&Accessories" "Cables  
USB Cables" "Computers&Accessories" "Accessories&Peripherals" "Cables&Accessories" "Cables  
USB Cables" "Computers&Accessories" "Accessories&Peripherals" "Cables&Accessories" "Cables  
USB Cables" ...  
 $ discounted_price : chr "€399" "€199" "€199" "€329" ...  
 $ actual_price : chr "€1,099" "€349" "€1,899" "€699" ...  
 $ discount_percentage : chr "64%" "43%" "90%" "53%" ...  
 $ rating : chr "4.2" "4.0" "3.9" "4.2" ...  
 $ rating_count : chr "24,269" "43,994" "7,928" "94,363" ...  
 $ about_product : chr "High compatibility : Compatible with iPhone 12, 11, X/XsMax/Xr, iPhone  
e 8/8 Plus, iPhone 7/7 Plus, iPhone 6s/6s Plus" "Compatible with all Type C enabled devi  
ces, be it an android smartphone (Mi, Samsung, Oppo, Vivo, Realme, OnePlus) " "Fast C  
harger&Data Sync" "With built-in safety protections and four-core copper wires promote maximum si  
gnal" ...  
 $ user_id : chr "AG3D604STAKQAY2UNGEU46KN35Q, AHMYSQWJMMK5B3RBB8SNLYT30N1LA, AHCT6ULH4X  
B6YHDV6CH2R77LQ, AGVHIERXNKA6P577CZLXKVP" "AECPFYFQVRUMK3KGNLJOREFP5LQ, AGYYPDD7Y  
G7FYBNXGKZJ7525AQ, AHONZU31CIEHQJGQ6R2VFR5BXOQ, AFPHDZCRPDZMMBL7WXS5VYW" "AGU388QZV  
20DA0KAFKAFMD0Q0HA, AEF5LDZPT36372AQJMO0Z4N3QA, AHTPQRIKGDABYBSVTHBH3CCQFQ, AEUW00YPSL77ZLLZENE  
2N0" ...  
 $ user_name : chr "Manav, Adarsh gupta, SundeeP, S.Sayed Ahmed, jaspreet singh, Khaja moin, A  
nand, S. ARUNIGAM" "Arkn, Nirbhay kumar, Sagar Viswanathan, Asp, P.aceholder, Bharani, sonia, Niam" "Kunal,  
Himanshu, viswanath, sai nithika, sanib malik, ashig, Ramu Challa, Sanjay gupta" "Omkar dhale, JD, HEMALAT  
HA, Ajwadha a., amar singh chouhan, Ravi Siddan, Himanshu Goel, Udaykumar" ...  
 $ review_id : chr "R3HWTOLRPONMF, R2AJM3LFTLZHF0, R6AQJGUP6P86, R1KD19VHEDEV00R, R3C02RMYQM  
6FC, R39GQRBUZBWGY, RZK9EDOE1SQIRJ, R30IT7Y648TL81" "RGIOEG07R9HS2, R1SMWZQ8KXN8U, R2J3Y1ML29GDE, RYGG  
sqQAOAL...SV445_SX342_QL70_FWebp...jpg" "https://m.media-amazon.com/images/I/WEBP_402378-T1/images/  
I/311VN3ZmndL...SV445_SX342_QL70_FWebp...jpg" "https://m.media-amazon.com/images/I/41V5FTEWPKL...SX30  
0_SV300_QL70_FWebp...jpg" ...  
> # Summary of dataset  
> summary(amazon)  
product_id Length:1465 Class:character Mode:character  
product_name Length:1465 Class:character Mode:character  
category Length:1465 Class:character Mode:character  
discounted_price Length:1465 Class:character Mode:character  
actual_price Length:1465 Class:character Mode:character  
discount_percentage Length:1465 Class:character Mode:character  
rating Length:1465 Class:character Mode:character  
rating_count Length:1465 Class:character Mode:character  
about_product Length:1465 Class:character Mode:character  
user_id Length:1465 Class:character Mode:character  
user_name Length:1465 Class:character Mode:character  
review_id Length:1465 Class:character Mode:character  
review_title Length:1465 Class:character Mode:character  
review_content Length:1465 Class:character Mode:character  
img_link Length:1465 Class:character Mode:character  
product_link Length:1465 Class:character Mode:character  
> # Get column names  
> names(amazon)  
[1] "product_id" "product_name" "category" "discounted_price"  
[3] "actual_price" "discount_percentage" "rating" "rating_count"  
[5] "about_product" "user_id" "user_name" "review_id"  
[7] "review_title" "review_content" "img_link" "product_link"  
> cat("Column Names: ", names(amazon), "\n")  
Column Names: product_id product_name category discounted_price actual_price discount_percentage r  
ating rating_count about_product user_id user_name review_id review_title review_content img_link p  
roduct_link  
> # Detailed descriptive statistics using psych package  
> describe(amazon)  
Error in describe(amazon) : could not find function "describe"  
library(psych) # For descriptive statistics
```

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Source

```
R - R452 - ~/...  
Error in describe(amazon) : could not find function "describe"  
  
> library(psych) # For descriptive statistics  
> # Detailed descriptive statistics using psych package  
> describe(amazon)
```

	vars	n	mean	sd	median	trimmed	mad	min	max	range	skew
product_id*	1	1465	679.74	386.74	682	680.60	493.71	1	1351	1350	-0.02
product_name*	2	1465	664.55	386.65	664	663.38	498.15	1	1337	1336	0.01
category*	3	1465	96.10	60.59	98	95.04	81.54	1	211	210	-0.05
discounted_price*	4	1465	270.07	161.97	273	267.81	209.05	1	550	549	0.09
actual_price*	5	1465	234.31	144.58	243	234.35	198.67	1	449	448	-0.02
discount_percentage*	6	1465	44.31	22.47	46	44.69	23.72	1	92	91	-0.14
rating*	7	1465	19.68	3.28	20	19.99	2.97	1	28	27	-1.20
rating_count*	8	1465	571.70	331.03	564	571.06	419.58	1	1144	1143	0.02
about_product*	9	1465	639.70	377.16	630	638.76	490.74	1	1293	1292	0.02
user_id*	10	1465	599.29	346.56	606	599.19	447.75	1	1194	1193	0.01
user_name*	11	1465	606.97	346.69	614	608.46	447.75	1	1194	1193	-0.03
review_id*	12	1465	588.97	342.12	588	587.76	434.40	1	1194	1193	0.02
review_title*	13	1465	601.45	349.83	603	601.94	450.71	1	1194	1193	-0.01
review_content*	14	1465	598.62	351.79	589	597.05	452.19	1	1212	1211	0.04
img_link*	15	1465	703.72	407.11	699	703.03	523.36	1	1412	1411	0.02
product_link*	16	1465	733.00	423.05	733	733.00	542.63	1	1465	1464	0.00

	kurtosis	se
product_id*	-1.18	10.10
product_name*	-1.22	10.10
category*	-1.22	1.58
discounted_price*	-1.19	4.23
actual_price*	-1.36	3.78
discount_percentage*	-0.81	0.59
rating*	2.79	0.09
rating_count*	-1.19	8.65
about_product*	-1.22	9.85
user_id*	-1.21	9.05
user_name*	-1.19	9.06
review_id*	-1.18	8.94
review_title*	-1.21	9.14
review_content*	-1.20	9.19
img_link*	-1.20	10.64
product_link*	-1.20	11.05

```
> View(amazon_data)  
> |
```

Environment

amazon	1465 obs. of 16 variables
amazon_data	1465 obs. of 16 variables

Files

Name	Size	Modified
desktop.ini	418 B	Nov 24, 2025, 10:19 AM
Experience-Salary.csv	37.2 KB	Sep 18, 2025, 2:37 PM
graph scala m2 1.py	686 B	Sep 1, 2025, 8:55 AM
heart.csv	36 KB	Sep 18, 2025, 7:41 PM
HINDI ANSWERS.docx	29.6 KB	Oct 8, 2025, 11:52 AM
human_friendly_moving_averages.png	163.2 KB	Sep 21, 2025, 4:55 PM
JAVA VIDEO.mp4	16.7 MB	Oct 2, 2025, 6:40 PM
Main_Page_Format_of_Project_Report(1).docx	17.5 MB	Oct 15, 2025, 6:22 PM
Marvel's Spider-Man 2		
Marvel's Spider-Man Remastered		
medical_insurance.csv	112.4 KB	Sep 15, 2025, 12:04 PM
message_board.sql	413 B	Sep 22, 2025, 8:02 PM
MessiRonaldo.csv	837 B	Aug 25, 2025, 11:39 AM
moving_averages.png	114.1 KB	Sep 21, 2025, 4:52 PM
My Games		
NetBeansProjects		
PRACTICAL 3 QUESTIONS.pdf	226.1 KB	Aug 2, 2025, 12:49 PM
Practical No. 1.docx	4 MB	Nov 13, 2025, 1:11 PM