

SHETH L.U.J & SIR M.V COLLEGE OF SCIENCE

SUBJECT : Data Analysis with SAS / SPSS /R

AIM : Performing paired t-tests using `t.test(paired=TRUE)` (R).

OUTPUT

```

RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins
Source
Console Terminal Background Jobs
R - R 4.5.2 · ~/
> print(" --- 6. Paired t-test ---")
[1] " --- 6. Paired t-test ---"
>
> df <- read.csv("Winter_Fashion_Trends_Dataset.csv")
> # 1. Create simulated paired data
> df$Discounted_Price <- df$Price - runif(nrow(df), min = 5, max = 20)
> # 2. Perform paired t-test
> t_test_paired <- t.test(df$Price,
+                         df$Discounted_Price,
+                         paired = TRUE)
> print(t_test_paired)

Paired t-test

data: df$Price and df$Discounted_Price
t = 39.503, df = 149, p-value < 2.2e-16
alternative hypothesis: true mean difference is not equal to 0
95 percent confidence interval:
12.28630 13.58018
sample estimates:
mean difference
12.93324

> View(df)
> View(t_test_paired)
> |

```

S108-R-PROGRAM PRAC6 M-2.R x df x t_test_paired x

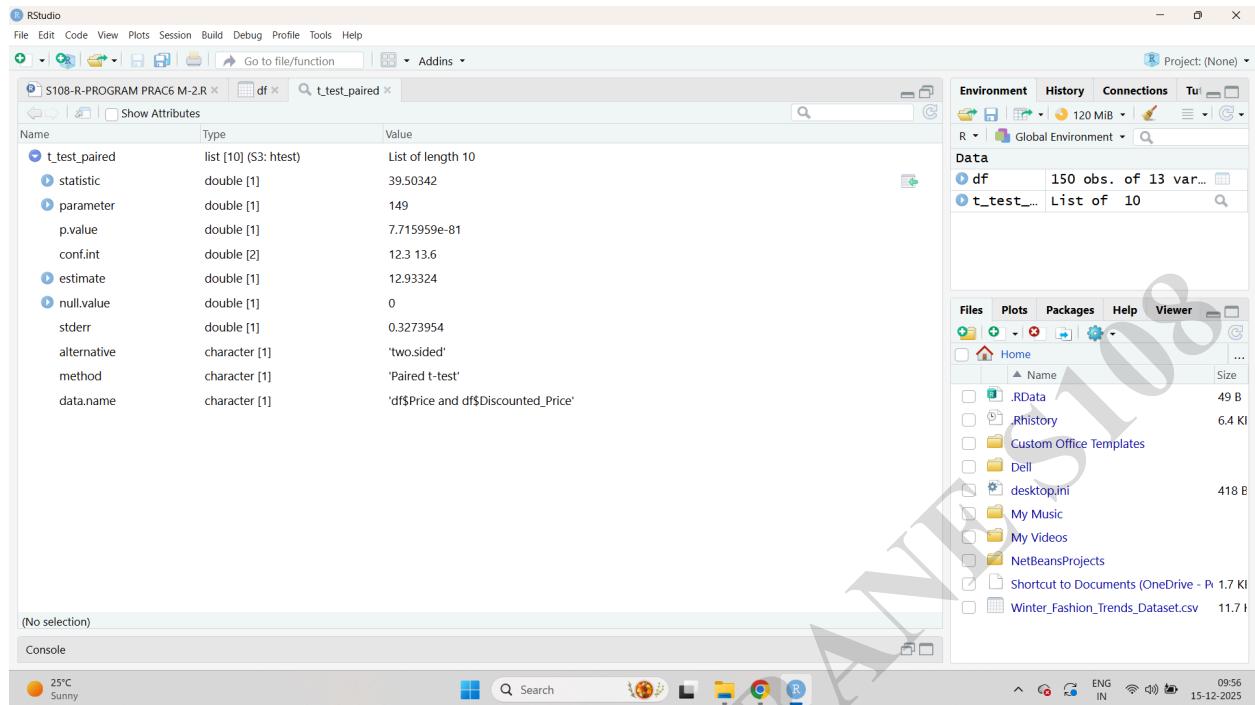
ID	Brand	Category	Color	Material	Style	Gender	Season	Price.USD.	Popularity_Score	Customer_Rating	Trend
1	Adidas	Gloves	Brown	Polyester	Streetwear	Women	Winter 2025	244.06	6.0	4.9	Trend
2	Gucci	Gloves	Red	Leather	Sporty	Men	Winter 2023	366.73	8.8	3.3	Trend
3	H&M	Coat	Brown	Fleece	Streetwear	Unisex	Winter 2025	741.55	4.8	3.5	Trend
4	North Face	Coat	Blue	Cashmere	Formal	Men	Winter 2024	116.09	7.5	3.1	Outd.
5	Mango	Thermal	Blue	Cashmere	Formal	Unisex	Winter 2025	193.16	7.8	4.3	Outd.
6	Uniqlo	Thermal	Black	Fleece	Formal	Unisex	Winter 2025	699.85	1.7	4.2	Outd.
7	Uniqlo	Coat	Gray	Fleece	Casual	Men	Winter 2025	497.79	9.7	3.0	Trend
8	Mango	Sweater	Cream	Cotton	Streetwear	Unisex	Winter 2025	579.37	6.6	3.8	Outd.
9	Gucci	Gloves	Brown	Cotton	Casual	Unisex	Winter 2024	315.96	6.2	2.8	Outd.
10	Mango	Scarf	Maroon	Leather	Luxury	Unisex	Winter 2023	468.58	2.5	4.9	Classi
11	Gucci	Beanie	Gray	Cotton	Sporty	Unisex	Winter 2023	452.18	3.3	2.6	Outd.
12	Adidas	Scarf	Green	Polyester	Streetwear	Women	Winter 2024	568.66	2.6	3.1	Emerg
13	Zara	Cardigan	Beige	Cashmere	Luxury	Men	Winter 2023	532.17	1.2	2.5	Trend
14	Mango	Thermal	Beige	Cashmere	Streetwear	Men	Winter 2025	95.96	2.4	3.3	Classi
15	Uniqlo	Gloves	Brown	Cashmere	Formal	Unisex	Winter 2025	735.62	5.8	4.0	Classi
16	Uniqlo	Scarf	Brown	Wool	Formal	Women	Winter 2023	52.28	3.9	3.7	Classi
17	H&M	Jacket	White	Fleece	Formal	Men	Winter 2023	694.54	6.2	3.1	Emerg
18	Adidas	Cardigan	White	Leather	Casual	Men	Winter 2025	779.50	2.5	4.3	Trend
19	Mango	Cardigan	Cream	Cashmere	Formal	Women	Winter 2025	640.66	8.4	4.1	Outd.

Showing 1 to 19 of 150 entries, 13 total columns

Console

25°C Sunny 09:56 15-12-2025

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The screenshot shows the RStudio interface with the following details:

- File Menu:** File, Edit, Code, View, Plots, Session, Build, Debug, Profile, Tools, Help.
- Project:** Project: (None)
- Environment Tab:** Shows objects in the global environment:
 - df: 150 obs. of 13 vars.
 - t_test_paired: List of 10
- Data Tab:** Shows the contents of the 't_test_paired' object, which is a list of length 10.

Name	Type	Value
t_test_paired	list [10] (S3: htest)	List of length 10
statistic	double [1]	39.50342
parameter	double [1]	149
p.value	double [1]	7.715959e-81
conf.int	double [2]	12.3 13.6
estimate	double [1]	12.93324
null.value	double [1]	0
stderr	double [1]	0.3273954
alternative	character [1]	'two.sided'
method	character [1]	'Paired t-test'
data.name	character [1]	'df\$Price and df\$Discounted_Price'
- Files Tab:** Shows the file structure:
 - Home
 - .RData (49 B)
 - Rhistory (6.4 Ki)
 - Custom Office Templates
 - Dell
 - desktop.ini (418 B)
 - My Music
 - My Videos
 - NetBeansProjects
 - Shortcut to Documents (OneDrive - P) (1.7 Ki)
 - Winter_Fashion_Trends_Dataset.csv (11.7 Ki)
- Console:** Shows '(No selection)'.
- Bottom Bar:** Shows the system tray with icons for battery, signal, and date/time (15-12-2025).

