A.S.A Lab Assignment 3

Name: Swanand Garge

Div : D(D2)

Roll no :42

SRN: 202201589

Q. *To create standardized (Z-) scores for several variablesUsing the preexisting Drinks.csv data file*

```
drinks=read.csv(file.choose())
View(drinks)

mean_bs<-mean(drinks$beer_servings)
mean_bs
sd_bs<-sd(drinks$beer_servings)
sd_bs



drinks$Z_beer_servings<-(drinks$beer_servings-mean_bs)/(sd_bs)
View(drinks)

round(mean(drinks$beer_servings),digits=0)
sd(drinks$beer_servings)
```

```
mean_bs<-mean(drinks$spirit_servings)
mean_bs
sd_bs<-sd(drinks$spirit_servings)
sd_bs



drinks$Z_spirit_servings<-(drinks$spirit_servings-mean_bs)/(sd_bs)
View(drinks)

round(mean(drinks$spirit_servings),digits=0)
sd(drinks$spirit_servings)

mean_bs<-mean(drinks$wine_servings)
mean_bs
sd_bs<-sd(drinks$wine_servings)
sd_bs



drinks$Z_wine_servings<-(drinks$wine_servings-mean_bs)/(sd_bs)
View(drinks)

round(mean(drinks$wine_servings),digits=0)
sd(drinks$wine_servings)



write.csv(drinks, "D:\\PROGRAMMING\\R-drinks.csv", row.names = FALSE)
```

Output :

```
> drinks=read.csv(file.choose())
> View(drinks)
>
> mean_bs<-mean(drinks$beer_servings)
> mean_bs
[1] 106.1606
> sd_bs<-sd(drinks$beer_servings)
> sd_bs
[1] 101.1431
>
```

```
> round(mean(drinks$beer_servings),digits=0)
[1] 106
> sd(drinks$beer_servings)
[1] 101.1431
>
```

```
> mean_bs<-mean(drinks$spirit_servings)
> mean_bs
[1] 80.99482
> sd_bs<-sd(drinks$spirit_servings)
> sd_bs
[1] 88.28431
>
```

```
> drinks$Z_spirit_servings<-(drinks$spirit_servings-mean_bs)/(sd_bs)
> View(drinks)
>
> round(mean(drinks$spirit_servings),digits=0)
[1] 81
> sd(drinks$spirit_servings)
[1] 88.28431
>
```

```
> mean_bs<-mean(drinks$wine_servings)
> mean_bs
[1] 49.45078
> sd_bs<-sd(drinks$wine_servings)
> sd_bs
[1] 79.6976
>
```

```
> drinks$Z_wine_servings<-(drinks$wine_servings-mean_bs)/(sd_bs)
> View(drinks)
> drinks$Z_wine_servings<-(drinks$wine_servings-mean_bs)/(sd_bs)
> View(drinks)
>
> round(mean(drinks$wine_servings),digits=0)
[1] 49
> sd(drinks$wine_servings)
[1] 79.6976
>
```

Final output(Rewritten):

	country	beer_servings	spirit_servings	wine_servings	total_litres_of_pure_alcohol	continent	Z_beer_servings	Z_spirit_servings	Z_wine_servings
1	Afghanistan	0	0	0	0.0	AS	-1.04960812	-9.174316e-01	-0.62048014
2	Albania	89	132	54	4.9	EU	-0.16966675	5.777378e-01	0.05708105
3	Algeria	25	0	14	0.7	AF	-0.80243358	-9.174316e-01	-0.44481613
4	Andorra	245	138	312	12.4	EU	1.37270239	6.457000e-01	3.29431787
5	Angola	217	57	45	5.9	AF	1.09586690	-2.717903e-01	-0.05584581
6	Antigua & Barbuda	102	128	45	4.9	*NA*	-0.04113599	5.324296e-01	-0.05584581
7	Argentina	193	25	221	8.3	SA	0.85857934	-6.342556e-01	2.15250178
8	Armenia	21	179	11	3.8	EU	-0.84198151	1.110109e+00	-0.48245842
9	Australia	261	72	212	10.4	OC	1.53089409	-1.018847e-01	2.03957492
10	Austria	279	75	191	9.7	EU	1.70885976	-6.790356e-02	1.77607890
11	Azerbaijan	21	46	5	1.3	EU	-0.84198151	-3.963877e-01	-0.55774299
12	Bahamas	122	176	51	6.3	*NA*	0.15660364	1.076128e+00	0.01943876
13	Bahrain	42	63	7	2.0	AS	-0.63435489	-2.038280e-01	-0.53264814
14	Bangladesh	0	0	0	0.0	AS	-1.04960812	-9.174316e-01	-0.62048014
15	Barbados	143	173	36	6.3	*NA*	0.36423026	1.042146e+00	-0.16877268
16	Belarus	142	373	42	14.4	EU	0.35434328	3.307555e+00	-0.09348810
17	Belgium	295	84	212	10.5	EU	1.86705147	3.403981e-02	2.03957492