How can the RANUNI function be used in SAS and what are some examples of its application?

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The RANUNI function in SAS is a powerful tool that allows users to generate random numbers according to a specified distribution. This function can be used in a variety of applications, such as simulation studies, statistical analyses, and data manipulation. For example, it can be used to create a random sample of data for testing purposes, to generate random values for Monte Carlo simulations, or to assign random treatments to subjects in a clinical trial. Additionally, the RANUNI function can be customized to simulate various distributions, including uniform, normal, exponential, and Poisson. Its versatility and ease of use make it a valuable tool for researchers and data analysts in a wide range of fields.

Use the RANUNI Function in SAS (With Examples)

You can use the RANUNI function in SAS to generate values from the .

This function uses the following syntax:

RANUNI(seed)

where:

seed: A non-negative integer to use as initial starting point for generating random values.

The following example shows how to use this function in practice.

Example 1: Use RANUNI Function to Generate One Random Value

We can use the following syntax with the RANUNI function to create a dataset that contains one random

value between 0 and 1:

```
/*create dataset with one random value between 0 and 1*/
data my_data;
my_value=ranuni(0);
run;/*view dataset*/
proc printdata=my_data;
```

Obs	my_value
1	0.49370

The RANUNI function generated the value 0.49370.

By default, the RANUNI function generates a random value between 0 and 1.

However, you can multiply the result of the RANUNI function by *n* to instead generate a random value between 1 and *n*.

For example, we can use the following syntax to generate a random value between 0 and 10:

```
/*create dataset with one random value between 0 and
```

```
10*/
data my_data;
my_value=ranuni(0)*10;
run;/*view dataset*/
proc printdata=my_data;
```

Obs	my_value
1	4.17403

This time the RANUNI function generated the value 4.17403.

Example 2: Use RANUNI Function to Generate Several Random Values

We can use the following syntax with the RANUNI function to create a dataset that contains ten random values between 0 and 100:

```
/*create dataset with 10 random values between 0 and 100*/
data my_data;
do i=1to10by1;
my_value=ranuni(0)*100;
output;
```

```
end;
run;/*view dataset*/
proc printdata=my_data;
```

Obs	i	my_value
1	1	7.1356
2	2	97.1735
3	3	40.0084
4	4	64.9957
5	5	68.3747
6	6	23.3451
7	7	31.4081
8	8	0.5453
9	9	53.7925
10	10	14.6201

Notice that each of the values in the my_value column are between 0 and 100.

The following tutorials explain how to perform other common tasks in SAS: