

# Topic 4 Generating Data

---

## Do Loops

Exmample:

```
data DOLLOOP;  
DO i = 1 TO 100;  
X = 3+5* RANNOR(59);  
OUTPUT;  
END;  
RUN;
```

## Generating Random Variables

- no data is generated by RANNOR(59). It has been created in a temporary file. If you want to see the data, or do an analysis, you must use PROC statement.
- the 59 in RANNOR(59) is the seed, which will generate the same set of random number everytime we run this program. If we want to generate different number every time, we should specify seed as "0"

| SAS Code           | Distribution            |
|--------------------|-------------------------|
| RANBIN(seed, n, p) | Binomial, b(n,p)        |
| RANEXP(seed)       | Exponential, Exp(1)     |
| RANNOR(seed)       | Standard Normal, N(0,1) |
| RANPOI(seed, m)    | Posisson, Poisson(m)    |
| RANUNI(seed)       | Uniform, U(0,1)         |

## proc mean

```
proc means data=data_file maxdec = 1  
var mean  
run;
```

note:

maxdec: maximum number of decimals in results