|       | $\chi <$   |
|-------|--|
|       |  |
| -     | Probability Distribution > sum & all probabilities is 1                                  |
|       | Pio bakiling   |
| All . | P = P = 1 - q  |
| 5     | $\frac{P \leq x = 0 \leq -\alpha = 1 - p}{eg} \qquad \text{throw}$                       |
|       |  |
|       | distributed. Bernovill grandom Variable, each with                                       |
|       | probability p of success   |
|       | $P_n \begin{cases} x_i = 1 \\ 3 = P \end{cases}$   |
|       | $P_{n} \sum x_{i} = 0 $ $3 = 1 - p$  |
| 78    | $S_n = X_1 + X_2 + + X_n$ be the number of succession                                    |
|       | in n bernoulle thials  |
|       | $0 \le S_n \le n$<br>$S_i = \# successes in 1 trial$                                     |
|       | · ·  |
| A.    | Process Sn is defined as à bemoulle prouss   |
| W.    | Index set -> All nextural numbers  |
| -     | State space - Non negative integers  |
| 0     |  |
| -63   | $S_n = S_{n-1} + X_n$ $P \left\{ S_n = K \mid S_{n-1} = K-1 \right\} - londitional prob$ |
|       | $P[S_{n-1} = K-1] - londitional prob$ $S_{n-1} = K-1] = P$                               |
|       | $P S S_n = K / S_{n-1} = K ? = P (X_n = 0) = 1-P$  |
|       |  |
|       | Now Sn = K-1 or K-2 -> But this does not affect the                                      |
| -     | conditional probability of Sn.   |
|       |  |
|       | Future depends only on the present and not on the  |
| 4     | P& Sn=K   Sn-1 = K-1, Sn-2 = K-1] = P{Sn=K   Sn-1 = K-1, Sn-2 k-2}                       |
|       | respectively   |
| 2     | Spiral   |
|       | ·  |

| Stochastic procuss in which a jutim state depends only on the free and and not on the past to  Aled a Markovial free as and the property is  Aled memory (as proposability  Non markovial - juture depends on present end post  Expected value of Sn = np of Binemial distribution  Variance is Sn = np of Binemial distribution  Place of Succession  Place of Procession  Place of Secondary  Procession  Procession  A benowle variable, the number of trials  rawing jailures between two succession is distributed  In a benowle variable, the number of trials  rawing jailures between two succession is distributed  If (T) = 2 k of p  Var (T) = 0.  Place of Secondary  Place of Secondary  Place of Secondary  Secondary  Procession  Var (T) = 0.  Secondary  Para of Secondary  Para of Secondary  Para of Secondary  Para of Secondary  Noment (T) = 0.0  Secondary  Para of Secondary  Para of Secondary  Para of Secondary  Para of Secondary  Noment (T) = 0.0  Secondary  Para of Secondary  Par  | Dat  | 'e             |
|---|--|----------------|
| Alled a Markovial precus and not on the past to alled a Markovial precus and this presents is alled memory (as probability).  Non markovial = future depends on present and past in 2 binomial distribution with parameter n and post.  Expected value of Sn = np q. Binomial distribution.  Variance is Sn = np q. Mornert generation function = (qtpet)?  Stanting at particular beneable trial is number it as number it is number if as number it is number if a number it is number if it is after the trials, it at the kill the lead.  In a benouble variable, the number of taxals training failures between two processors is distributed in a geometric random variable.  F(T) = Ekq p = q.  Van (T) = q.  Fereigness in the processors is distributed in the number of taxals.  F(T) = Q.  Fereigness in the processors is distributed in the processors of the processors in the processors of the processor of the processors of the processor of the processo  | A stochastic process is which a jutine 3                 | tate depends   |
| Alled a Markovial preaso and this property is  Alled mannery less probability  Non markovial - future depends on present and past  The shoom all distribution with parameter n and past  Expected value of Sn = npq.  Homent generation function = (9+pet)^n  Stanting at particular beneable to all  The number of succeeding trials T beyon the next  futures accura  P[T=K] = (1+p)^k p = q^k p where K=0,112  P+ q,p+ q^2p+ q^2p+= p(1+q+q^2+q^3+) Geometric  P-1-q p  The at the K+th Rial  The abstraction two parameters is distributed  The appropriate variable, the number of trials  The appropriate variable, the number of trials  The appropriate random variable.  F(T) = q p  Van (T) = q  P*   | nly on the present and not on the                        | e past is      |
| Non markerial = future depends on present and past  Son markerial = future depends on present and past  Expected value of $S_n = np$ Binemial distribution  Variance of $S_n = npq$ Moment generation function = $(q+pe^{\frac{t}{n}})^n$ Starting at particular beneable to all  The number of succeeding trials $T$ below the next  futures occurs $P[T-K] = (1-p)^k P = q^k P$ where $K=0,1,2$ $p+q_1p+q^2p+q^2p+=p(1+q_1+q^2+q^3+)$ For $p+q_1p+q^2p+q^2p+=p(1+q_1+q^2+q^3+)$ Then it is after $K$ trials, $p+q_1p+q^2p+q^2p+=p(p+q_1+q_2+q^3+)$ For $p+q_1p+q^2p+q^2p+=p(p+q_1+q_2+q^3+)$ Then it is after $K$ trials, $p+q_1p+q_1+q_2+q_2+q_3+=p(p+q_1+q_2+q^3+)$ For $p+q_1p+q_2+q_2+q_3+=p(p+q_1+q_2+q_2+q_3+)$ For $p+q_1p+q_2+q_2+q_3+=p(p+q_1+q_2+q_2+q_3+)$ For $p+q_1p+q_2+q_3+q_3+=p(p+q_1+q_2+q_3+)$ For $p+q_1p+q_2+q_3+=p(p+q_1+q_2+q_3+)$ For $p+q_1p+q_2+q_1+q_2+q_3+=p(p+q_1+q_2+q_3+)$ For $p+q_1p+q_2+q_2+q_3+=p(p+q_1+q_2+q_3+)$ For $p+q_1p+q_2+q_2+q_3+=p(p+q_1+q_2+q_3+)$ For $p+q_1p+q_2+q_2+q_3+=p(p+q_1+q_2+q_3+)$ For $p+q_1p+q_2+q_2+q_3+=p(p+q_1+q_2+q_3+)$ For $p+q_1p+q_2+q_2+q_3+=p(p+q_1+q_2+q_3+)$ For $p+q_1p+q_2+q_2+q_3+=p(p+q_1+q_2+q_2+q_3+)$ For $p+q_1p+q_2+q_2+q_3+=p(p+q_1+q_2+q_2+q_3+)$ For $p+q_1p+q_2+q_2+q_3+=p(p+q_1+q_2+q_2+q_3+)$ For $p+q_1p+q_2+q_2+q_3+=p(p+q_1+q_2$   | elled a Markovial process and this                       | property is    |
| Non markerial - future depends on present and post $\frac{1}{2}$ binomial distribution with parameter $n$ and $p$ .  Expected value $\frac{1}{2}$ $S_n = np$ $\frac{1}{2}$ $\frac{1}{2$ | alled memory less strobalition                           |                |
| Expected value of $S_n = np$   Binemial distribution  Variance is $S_n = npq$   Binemial distribution  Variance is $S_n = npq$   Aller of the following department of purchase of purchase $q$   $q + pct$   $q$    Starting at particular behaviole to aller of number of succeeding trials $q$   $q + pct$   $q$  |  |                |
| Expected value of $S_n = np$   Binemial distribution  Variance is $S_n = npq$   Binemial distribution  Variance is $S_n = npq$   Aller of the following department of purchase of purchase $q$   $q + pct$   $q$    Starting at particular behaviole to aller of number of succeeding trials $q$   $q + pct$   $q$  | Von markovial - future depends on prusery                | e and past     |
| Expected value of $S_n = nP$ Binemial distribution  Variance of $S_n = nPq$ Moment generation function = $(q_1 + pe^{\frac{t}{2}})^n$ Starting at particular bemoville trial  The number of succeeding trials $T$ begons the next  fucus accord $P[T=K] = (1-P)^K P = q^K P$ where $K=0 1 .2$ $P+q_1P+q_2^2P+q_3^3P+=P(1+q_1+q_2^2+q_3^3+)$ Series. $P-1=P-1=1$ $1-q_1$ The at the K+1 the Rian.  In a beneville variable, the number of trials of the analogy failures between true $P$ successive is distributed and $P$  | 2 Abrana in 1 Alia ka ila ui ulla a a a manda a          | and 0          |
| Expected value of $S_n = np$ Binemial distribution  Variance of $S_n = npq$ Moment generation function = $(q_1 + pc^{\frac{1}{2}})^n$ Starting at particular behaville trial  in number of, succeeding trials $T$ begons the next  fucus occurs $P[T=K] = (1-p)^K \cdot p = q^K p$ where $K=0,1,2,\ldots$ $p+qp+q^2p+q^3p+\ldots=p(1+q+q^2+q^3+\ldots)$ Series. $p' \cdot 1 = p' \cdot 1 = 1$ $1-qv$ $p$ Then it is after $K$ trials, it at the $K+1$   | n 7 omonius astronus on with paramon n                   | <i>ωω γ</i>    |
| Moment generation function = $(q+pe^{\frac{t}{2}})^n$ Stanting at particular bemoville trial  ise number a succeeding trials $T$ begon the next  success accurs $P[T=K] = (1-p)^k$ $P = q^k P$ where $K=0 1 2$ $P+q_P+q_P^2P+q_P^3P+=P(1+q_1+q_2+q_3+)$ Series $P(1-q) = P(1-q) = 1$ $1-q$ $P$ Ince it is after $K$ trials, $1e^{\frac{t}{2}}$ at the $K+1$ th $E$ 102.  In a bemoville variable, the number of trials  rawing failures between two successive is distributed $F(T) = \frac{t}{2} Kq^k P = \frac{q}{4}$ $Var(T) = \frac{q}{4}$  | Frankal Value of Same 7 Process                          | 1: 1- : 1 - 1: |
| Moment generation function = $(q+pe^{\frac{t}{2}})^n$ Manting at particular benotifie trial  is number & succeeding trials $T$ before the next  ideas accord $P[T=K] = (1-p)^k p = q^k p$ where $K=0 1/2$ $p+q_1p+q^2p+q^3p+=p(1+q_1+q_2+q_3+)$ Series. $p'-1=p'-1=1$ $1-q$ There it is after $K$ trials, $1e$ at the $K+1$ th $E$ (as).  In a benouble variable, the number of trials  rawing failures between two successive is distributed $F(T) = \sum_{k=0}^{\infty} Kq^k p = q_k$ $F(T) = \sum_{k=0}^{\infty} Kq^k p = q_k$ $F(T) = q_k$ $F(T) = q_k$   | Experted value & sn= 14 Binervial                        | distribution   |
| Then the succeeding beneather thial succeeding thials $T$ begons the next succeeding thials $T$ begons the next succeeding $P[T=K] = (I-P)^{K} P = q_{i}^{K} P$ where $K=0;1;2$ $P+q_{i}P+q_{i}^{2}P+q_{i}^{3}P+=P(I+q_{i}+q_{i}^{2}+q_{i}^{3}+)$ $P+q_{i}P+q_{i}P+q_{i}^{3}P+=P(I+q_{i}+q_{i}^{2}+q_{i}^{3}+)$ $P+q_{i}P+q_$   | Variance $Q_{ij} = npq_{ij}$                             |                |
| Rearring of particular benouble trial  is number & succeeding trials $T$ begons $W_{N}$ next  is number & succeeding trials $T$ begons $W_{N}$ next  is number & succeeding trials $T$ begons $W_{N}$ next $P[T=K] = (1-P)^{K} P = q^{K}P$ where $K=0,1,1,2,$ $P+q_{1}P+q^{2}P+q^{3}P+=P(1+q_{1}+q^{2}+q^{3}+)$ if $P=q_{1}P+q_{2}P+q_{3}P+=P(1+q_{1}+q^{2}+q^{3}+)$ if $P=q_{1}P+q_{2}P+q_{3}P+=P(1+q_{1}+q_{2}+q_{3}+)$ if $P=q_{1}P+q_{2}P+q_{3}P+=P(1+q_{1}+q_{2}+q_$   | Moment generation function = (9+Pe)                      |                |
| P[T=K] = $(1-p)^{k}$ . $p = q^{k}p$ where $k=0 1 2$ $p+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ Series $p+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+qp+q^{2}p+q^{3}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+q+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+q+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+q+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+q+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+q+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+q+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+q+qp+q^{2}p+q^{3}p+=p(1+q)+q^{2}+q^{3}+$ $p+q+q+q+q+q+q+q+q+q+q+q+q+q+q+q+q+q+q+q$   |  |                |
| P[T=K] = $(1-p)^{K}$ , $p = q^{K}p$ where $K=0 1/2$ $p+q_{1}p+q^{2}p+q^{3}p+=p(1+q_{1}+q_{2}^{2}+q_{3}^{3}+)$ $p+q_{1}p+q_{1}p+q_{2}p+q_{3}p+=p(1+q_{1}+q_{2}^{2}+q_{3}^{3}+)$ $p+q_{1}p+q_{2}p+q_{3}p+=p(1+q_{1}+q_{2}^{2}+q_{3}^{3}+)$ $p+q_{1}p+q_{2}p+q_{3}p+=p(1+q$  | Itanting at particular benouble trial                    |                |
| Where $P[T=K] = (I-P)^K$ , $P = Q^K P$ where $K=0 I 2$ $P+QP+Q^2P+Q^3P+=P(I+QI+Q^2+Q^3+)$ Geometric Series $P+QP+Q^2P+Q^3P+=P(I+QI+Q^2+Q^3+)$ $P+QP+QP+Q^3P+Q^3P+=P(I+QI+Q^2+Q^3+)$ $P+QP+QP+QP+QP+QP+QP+QP+QP+QP+QP+QP+QP+QP$  | e number of succeeding trials T begone                   | the next       |
| $P[T=K] = (I-P)^{2} P = q^{2}P  \text{where}  K=0,1,2$ $P+q_{1}P+q_{2}^{2}P+q_{3}^{3}P+=p(I+q_{1}+q_{2}^{2}+q_{3}^{3}+)  Series$ $= p\cdot J = p\cdot J = 1$ $I-q_{1} P$ $Hence, yes$ $Ince it is after K bials, K+1 the Kias.  In a bernoulle (process)  In a bernoulle (variable, the number of tivals)  Taking failures between two successive is distributed in a geometric random variable.  F(T) = \sum_{k=0}^{\infty} Kq^{k}P = q_{k} Var(T) = q_{p^{2}}$  | U(U)AA O(U)AA  |                |
| $p + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $= p \cdot 1 = p \cdot 1 = 1$ $1-q  p$ $\text{There it is after } k \text{ trials,}$ $1 + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $1 + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $1 + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $1 + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $1 + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $1 + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $1 + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $1 + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $1 + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $1 + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $1 + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $1 + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $1 + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $1 + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $1 + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $1 + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $1 + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $1 + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $1 + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $1 + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $1 + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $1 + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $1 + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $1 + q_1p + q_1^2p + q_1^2p + \dots = q_1^2p + $   | $P[T=K] = (I-P)^{K}P = q_{i}^{K}P$ where                 | K=011,2        |
| $p + q_1p + q_1^2p + q_1^3p + \dots = p(1+q_1+q_1^2+q_1^3+\dots)$ $= p \cdot 1 = p \cdot 1 = 1$ $1-q  p$ There, yes  The at the K+1 the Rial.  In a benouble variable, the number of tivals  rawing failures between two successive is distributed  like a glemetric random variable. $F(T) = \sum_{k=0}^{\infty} kq^k p = q$ $F(T) = q$ $P$ Var $(T) = q$  |  |                |
| ince it is after K trials,  is at the K+1th Eigh.  In a perspectle variable, the number of trials rawing failures between two $P$ successive is distributed a geometric random variable. $F(T) = \sum_{k=0}^{\infty} kq^{k}p = q$ $F(T) = q$ $P^{2}$  | ) Get  | seves.         |
| nce it is after K trials,  15 at the K+1 th Kial.  10 a berouble variable, the number of trials  11 and pailures between two ruccessive is distributed  12 is at the K+1 th Kial.  12 is at the Mimber of trials  13 successive is distributed  14 and glemetric random variable.  15 $F(T) = \sum_{K} K q^{K} p = q$ 16 $F(T) = q$ 16 $F(T) = q$   | $p + q_1 p + q_1 p + q_2 p + \dots = p(1+q)+q_1 + \dots$ | 4              |
| nce it is after K trials,  10 at the K+1 th Bias.  10 a benouble (process)  11 a benouble variable, the number of trials  12 arrange of the processive is distributed a glemetric random variable.  12 $F(T) = \sum_{K \in K} K q^K p = q$ 13 $F(T) = q$ 14 $F(T) = q$  | = p' _ = p' _ =  |                |
| nce it is after k trials,  15 at the K+1 the Kias.  (process)  1 a perspectle variable, the number of trials  (aving failures between two successive is distributed a geometric random variable. $F(T) = \sum_{K > 0} K q_{K} p = q_{K > 0}$ Var $(T) = q_{K > 0}$  |  |                |
| of the K+1th Riad.  (process)  n a bernouble (process)  variable, the number of trials  variable, successive is distributed a geometric random variable. $F(T) = \sum_{K \in S} K q^{K} p = q$ Var $(T) = q$ $P^{2}$  | Hence, yes   |                |
| of a beneville variable, the number of prossuring failures between two successive is distributed a geometric random variable. $F(T) = \sum_{K \neq 0} K q^{K} p = q_{K}$ $Var(T) = q_{F}$   |  |                |
| of a beneville variable, the number of prossuring failures between two successive is distributed a geometric random variable. $F(T) = \sum_{K \neq 0} K q^{K} p = q_{K}$ $Var(T) = q_{F}$   |  |                |
| away failures between two successive is distributed by a geometric random variable. $F(T) = \sum_{K=0}^{\infty} Kq^{K}p = q$ $Var(T) = q$ $P^{2}$   | (process)  | a trials       |
| Var $T$ = $q$ Var $T$ = $q$ $T$ $T$ $T$ $T$ $T$ $T$ $T$   | 3 30000  |                |
| $F(T) = \sum_{K > 0} K q^{K} p = q$ $Van(T) = q$ $P$  |  | w weigh BC     |
| $Var(T) = q$ $P^{2}$  | like a geometric random variable.                        |                |
| $Var(T) = q$ $P^{2}$  | $F(T) = \sum_{k=1}^{\infty} k q^{k} p = q$               |                |
| P2-   | Keo  |                |
| P2-   | Var (1) = q  | •              |
| Moment (T) = qe Spiral  | P2-  | ·<br>          |
|   | Moment (T) = qet   | Spiral         |

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| SQUE   | Date   |
|--|--|
| what is a generating of                                | unction? Give examples. Specifically, generating function in case  |
| 3 d a psubability distrib                              | is a function in case  |
| $Expectation \Rightarrow mean = E E(x^2) = Becomes$    | $(x) = \sum_{i=1}^{n} n_i p_i$   |
| $E(x-a)^{9} = 9.46$                                    | eint about origin = 5 x,2 p;   |
| $E(x-x)^{\frac{n}{2}}$ - Central me                    | oment Treplaving a with 2]   |
| $M_{x}(t) = E/e^{tx}$                                  | -  |
| $= E \int_{-1}^{1} t dx + t^{2}x$ $= 1 + tu' + t^{2}x$ | + $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$  |
| 3  | $\frac{+ \frac{1}{3}x}{2!} + \frac{1}{3!} + \frac{1}{3!} + \frac{1}{3!} + \frac{1}{3!}$  |
| Differentiate this                                     | thrice to get third moment   |
| generally go   | incon is used to final all   |
| the maments from a                                     | single function.   |
| 1-t = 1+t+t2+t3+                                       | and a great factor of the second seco |
| 3 Sdifferentiating thrice and                          | putting to gives 3!  |
| 3 This generating function                             | n generates n/   |
| If the Bernouli Irials                                 | are non homogeneous is   |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$  | $i = 1, 2, \ldots, n$  |
| Then find the express.                                 | or you the Puopasiery that   |
| out of n trials, then                                  | e are K successes. Pr.Ss,=K}_  |
| Lab & Simulation of Dio                                | binomial program benoule process   |
| Maite a program to o                                   | of a benowll: Spiral Process Non-homogeneous   |
| i) Homogeneous ii)                                     | Non-homogeneous  |

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| & Waste a program to find the premises of failures |  |
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