	Paraetes Fatination Dasignaent
	Paretes Estination Assignment [102103035-Antiet]
	THE WILL THE
Con	1 t/x x) lungamber sample of size in their from a Normal
(91)	p. Iting with sanctor: means of and war = 02. Find
	The main dip library Fatingtes of there two polariters.
	Let (x, x2.) be a random sample of size in their from a Normal Population with parameters: man = 01 and variance = 02. Find The Maximum dihelihood Estimates of there two parameters.
	$L(Q_1,Q_2 X_1,X_2,X_3,X_n) = \prod_{j=1}^n \frac{1}{\sqrt{2\pi}} \frac{e^{-\frac{(X_1-Q_1)^2}{2Q_2}}}{\sqrt{2\pi}}$
	2 (), 2, 13. · · · · · · · · · · · · · · · · · · ·
-	Then In likelihand.
	Toping dog likelitood:
	1.160 0 12 x 2 21-1=- 1 (Corp) - 1 E (2:-0)
-	ln L(0, 02/7, 72, 7/2, 7/2) = - 1/2 ln(2102) - 1 E(7; -0.)
	MIE GOOI:
	201/00/2 - 75 1 500 0950
	3 hl(0,0,1x,xn) = 1 \(\hat{\xi}(\pi, \in 0,0) = 0\)
	= = (xi) - ho, =0
	20.11
	$\Rightarrow 0, : \frac{1}{2} \xrightarrow{\Sigma} r; \rightarrow \overline{\Sigma}$
•	
	M1 E (00,07:
	2 ln (0,0,17,7n) = -1 \(\frac{1}{202} \) \(\frac{202}{202} \)
	292 203/11
	=>-v -1 \(\xi \) \(\xi \
	ON iss
	3 9 = 1 = 17, -9, 2 = 32
v: 1	MLE (& 01; I (mar)
	MIE (002: 87 (Voliano)

DATE

(B) Let X! X2. Xn Lu sander rample from B(m,0) distribution where 0 + @ =(0,1) is centerouser and 'm' is a known rus integer compate volved, 0 weing M. I. E

1 ((01x, x2... xn) = [[ln(m) + x; ln(0) + (m-x6.) ln(1-0)]

 $\frac{\partial \ln [(0/x, x_2...x_n) = \sum_{i=1}^{n} \left[\frac{x_i}{0} - \frac{x_i x_i}{1-0} \right] = 0}{\frac{2}{n} \left[\frac{x_i}{0} - \frac{x_i x_i}{1-0} \right] = 0}$ $\Rightarrow \sum_{i=1}^{n} \left[\frac{x_i(1-0) - 0(n-x_i)}{0(1-0)} \right] = 0$

=) of (Ex;) (mn+ Ex;)

let & 7; = 8 (succes (over)

- : 0 : 3