```
A Kinematics
                                                                                     - Dynamics
 A Generalized coordinates
                                                                                     M & + b + b = T + J T R come when
      R= [ 86 ] buce $6 = [ 86p] (SEB)
                                                                                     M(4) in+ b(5, m) + 0(3) = 5T+ JEFE
 A Generalized velocines
   \mathcal{U} = \begin{bmatrix} z \vee g \\ \partial \mathcal{W}_{2B} \\ \dot{\varphi}_{1} \end{bmatrix} \quad \dot{u} = \begin{bmatrix} \mathcal{L} & g \\ \partial \mathcal{W}_{2B} \\ \dot{\varphi}_{1} \end{bmatrix}
                                                                                   g_{n} = \begin{bmatrix} g_{1} \\ g_{2} \end{bmatrix} \text{ and county joints} \\ g_{n} = \begin{bmatrix} g_{1} \\ g_{2} \end{bmatrix} \text{ accounty joints} \\ \text{where such gold is a support } = \text{In} \text{ III} \begin{bmatrix} u_{0} \\ g_{2} \end{bmatrix}
                                                     € R*+"3
           ( to ] [ 40 ]
   We take Garage Track
                                                                                    > Mij+6+g= ₹ + J'Fe
                                                                                   Might be get TTE
 A Py of a pt on the mobile
I Real (b) = I Real (b) + Ceall) = Realt)
                                                                                   △ Saft connect
   IVa=IVa+ Cza-aR-an+Cza-phan
                                                                                      physical accuracy v. numerical study
         = xVB + Cxs[anks] x allea + GB Black
                                                                                  A Hand contect
        = zva - Czalanea Ixanea - Cza anac
                                                                                       · classic contact
                                                                                 N=0

N=0

N=0

Near complement constant
     = [Ina - Ges to real - Ges - ota (E)] a
      = = Tale) u
                                                                                            FN≥0
 A contact constraints
  - Co . contact point , conner move
                                                                                            PN = 0
   ( ITUIC: = const.
                                                                                            EN FN = D
                                                                                   △ Hard current of an MBS
       I Azcr = 2Jc, N=0
                                                                                    - MX+6+9 + INE - STE - (1)
    ( x Mac = = = Je + Je u = 0
                                                                                    _ sic = Jeg = 0
      Je = [ Je ] + Rangamen
                                                                                          AL - TOB+ TOB # 10
                                             Sx me of common
                                                                                    4 frames
   - Williamie
                                                                                         2 = A (5 = b-8-J. TE)
        0= Ac = It = 6 = 10 - Note = 160
                                                                                          W/ (2)
         0 = nc = 5.2. It = 6= I. (-1.8) + N. E.
                                                                                      Sic = Jo [M-15 8-6-9-369c)] + Job = 0
    - dinst paloty
         mak 0: We = Jog + Tighto
                                                                                   - BET Fo - contact funce
Gran (3)
         tosk I: We = Jes + Jes - mat
 - system must be to current conscious
                                                                                   E=(LM*[5]) (LM*(SE-4=1)+E)

Alen my concerning,
accommiss,
accommi
   A Contact Tocobian
                                                                                  1. W/ (1)
   - Te = 32 → construints ?
               = [Je,b Je,j] base a jump of realization because base trumpy
                                                                                  > Mg+b+g+ J. Commerce of = 5 to
                                                                                  > Mil +b+q+ Je wastersand = 5th
               = [ 3/4 3/4] Some
                                                                                    26NC - 26-2500 200 20 20
     - nonte (Jeb) => base is sty
                                                                                  = NEME +NELDON+
                                                                                           Nett compliance and a Nett
     - rank (Ja) - rank (Jas)
             and no.

of indepents

constitutes no motion of the less
                                                                                 = Nothing + Nothing) = Nothing
support consistent obligations
independent of reaction of
impulse transfer @ contact
                  no, of lements consoners
due joint accustors
     =5 (3)
(b=(3)
                                                                                     Stal (Minbog + Je Fe - STE) de
                                                                                   = M(w-w) + T_0 F_0 = 0 - a
= M(w-w) + T_0 F_0 + a
             TE = RAXT consorters of 2 control party
                                                                                         \Lambda_{i}^{\dagger} = \Im_{C} u^{\dagger} = 0 \qquad --- \iota_{A}
          numk(Je) = 4
          ank( 3.6)=3
                                                                                   => W/60
                                                                                        W-W-707 76 76 -- (3)
         4-3= ("1" kinematic a
                          of the americas)
                                                                                   DOW-JOU - JOM JOTE
                                                                                  = Jew = Jem Jet FE
     a generalized coundinates DON'T
              correspond to the degree of freedom
                                                                                   * Fee Meri = Mc Jeu
                                                                                    - - - - w+ - w (faum (3)
                                                                                                  = - MT Jet FE
                                                                                                   = -M+ Jc7_1_c Jc u-
                                                                                                   change in generalized tel
                                                                                    is when we mitterest mitty the
                                                                                                = []-M"I"(J.M"I")"]. ] W
                                                                                                  * No W" post-impact vel
                                                                                         Ne also maps w - w/
                                                                                    - Elos = A Exm
                                                                                    =- LawMan
                                                                                     · - dad Acare
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= - \$ 16 Ac 16