MATLAB: University of California, Davis

Computer LAB for Linear Algebra Dr. Daddel

MATH 22AL LAB # 6

10 Exercise 1:

Start Typing in MATLAB

Enter the matrix C = $\begin{bmatrix} 1 & 0 & 2 & 3 \\ 4 & -1 & 0 & 2 \\ 0 & -1 & -8 & -10 \end{bmatrix}$ in MATLAB. (you know how to enter a matrix in MATLAB)

a) Find a basis for the $row(C)$.

Type vectors that form a basis for the row space of C. Type your answer as R1C for the first vector and R2C for the second vector and R3C, ... as many as needed:

type	$R1C =$
type	$R2C =$
type	$R3C =$

b) Find a basis for the $row(C^t)$.

Type vectors that form a basis for the row space of C^t. Type your answer as R1CT for the first vector and R2CT for the second vector and R3C, ... as many as needed:

type	$R1CT =$
type	$R2CT =$
type	$R3CT =$

c) Find a basis for the $col(C)$.

Type vectors that form a basis for the column space of C. Type your answer as C1C for the first vector and C2C for the second vector and R3C, ... as many as needed:

type	$C1C =$
type	$C2C =$
type	$C3C =$

d) Find a basis for the $col(C^t)$.

Type vectors that form a basis for the column space of C^t. Type your answer as C1CT for the first vector and C2CT for the second vector and C3CT, ... as many as needed:

type	$C1CT =$
type	$C2CT =$
type	$C3CT =$

d) Find $rank(C)$ and $rank(C^t)$ by typing

type	RanC=$rank(C)$
type	RanCt=$rank(C')$

Write down dimension of $row(C)$ and $col(C)$ as:

type	Drowspace= type your answer here
type	Dcolspace= type your answer here