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| **Experiment No.** | 4 | | |

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| **AIM:** | To demonstrate concept of Gauss Elimination in Scilab |
| **PROBLEMS** | |
| **CODE:** | Program for finding the constitency of system of linear equation  A=[2,-2,1; 6,-6,3; 12,-12,6]  b=[1;3;6]  [x,kerA]=linsolve(A,b)  if isempty(x) then  printf("System of linear equation has no solution ")  else if isempty(n)  printf("System of linear equation has only one solution.It is given by: ")  disp(x);  printf("The vector n is :")  disp(kerA)  else  printf("The system of linear equation has infinite solutions")  disp(x);  printf("The vector n is :")  disp(kerA)  end  disp(x)  disp(kerA)    Gauss elimination general Code:  A=input("Enter the coefficents: ")  b=input("Enter the right-hand side C: ")  [m,n]=size(A)  [r,s]=size(b)  C=[A b]  for i=1:n  if C(i,i)==0  printf("Swapping C rows\n")  T=C(i,i)  C(i,:)=C(modulo(i+1,n),:)  C(modulo(i+1,n),:)=T  disp(C)  end  if C(i,i)~=1  printf("\nDividing rows %d with %.2f",i,C(i,i))  C(i,:)=C(i,:)/C(i,i)  end  disp(C)  for j=i+1:n  C(j,:)=C(j,:)-C(j,i)\*C(i,:)  end  disp(C)  end  for i=1:n  for j=i+1:n  C(i,:)=C(i,:)-C(i,j)\*C(j,:)  end  end  disp(C)    for i=1:n  for j=1:n  if i==j  printf("X%d = %.2f\n",i,C(i,n+1))  end  end  end |
| **OUTPUT:** | Example two: |
| **CONCLUSION:** Learnt about the gauss elimination and gauss Jordan elimination which converts the matrix from gauss elimination into a lower triangular matrix making it an identity matrix. | |