## Lab Exercise-3

1. Implement Tower of Hanoi on Stack using Linked list  2. Implement Parenthesis Matching on Stack using Linked list  3. Implement the insertion sort algorithm using doubly linked list  4. Take two sparse matrix A and B similar to following examples,  int A[5][6] =  {	Lab exercise (C/C++):	40
3. Implement the insertion sort algorithm using doubly linked list  4. Take two sparse matrix A and B similar to following examples, int A[5] [6] =  {	Implement Tower of Hanoi on Stack using Linked list	10
4. Take two sparse matrix A and B similar to following examples,  int A[5][6] =  {	Implement Parenthesis Matching on Stack using Linked list	10
<pre>int A[5][6] =</pre>	3. Implement the insertion sort algorithm using doubly linked list	10
{0 , 0 , 0 , 0 , 9 , 0 },		10
{0 , 0 , 0 , 0 , 9 , 0 },	{	
{0, 8, 0, 0, 0, 0},     {4, 0, 0, 2, 0, 0},     {0, 0, 0, 0, 0, 5},     {0, 0, 2, 0, 0, 0} }; int A[5][6] =     {      {0, 0, 0, 0, 1, 0},      {0, 0, 1, 0, 0, 5},      {0, 0, 1, 0, 0, 5},      {2, 8, 0, 0, 1, 0},      {0, 0, 4, 0, 0, 0} };  4.1. Write a program for the dense matrix multiplication 4.2. Represent them using array of linked lists 4.3. Write program for matrix multiplication using linked list		
{4 , 0 , 0 , 2 , 0, 0 },		
{0 , 0 , 0 , 0 , 0 , 5 },		
{0 , 0 , 2 , 0 , 0 , 0 } }; int A[5][6] = {             {0 , 0 , 0 , 0 , 1 , 0 },             {0 , 0 , 1 , 0 , 0 },             {0 , 0 , 1 , 0 , 0 , 5 },             {2 , 8 , 0 , 0 , 1 , 0 },             {0 , 0 , 4 , 0 , 0 , 0 } };  4.1. Write a program for the dense matrix multiplication 4.2. Represent them using array of linked lists 4.3. Write program for matrix multiplication using linked list		
<pre> }; int A[5][6] =  {</pre>		
<pre>int A[5][6] =     {         {0 , 0 , 0 , 0 , 1, 0 },         {0 , 5 , 0 , 2 , 0, 0 },         {0 , 0 , 1 , 0 , 0, 5 },         {2 , 8 , 0 , 0 , 1, 0 },         {0 , 0 , 4 , 0 , 0, 0 }     };  4.1. Write a program for the dense matrix multiplication 4.2. Represent them using array of linked lists 4.3. Write program for matrix multiplication using linked list</pre>		
{0,0,0,0,0,0}, {0,5,0,2,0,0}, {0,0,1,0,0,5}, {2,8,0,0,1,0}, {0,0,4,0,0,0}} };  4.1. Write a program for the dense matrix multiplication 4.2. Represent them using array of linked lists 4.3. Write program for matrix multiplication using linked list	int A[5][6] =	
{0,5,0,2,0,0}, {0,0,1,0,0,5}, {2,8,0,0,1,0}, {0,0,4,0,0,0} };  4.1. Write a program for the dense matrix multiplication 4.2. Represent them using array of linked lists 4.3. Write program for matrix multiplication using linked list	{	
{0,0,1,0,0,5}, {2,8,0,0,1,0}, {0,0,4,0,0,0} };  4.1. Write a program for the dense matrix multiplication 4.2. Represent them using array of linked lists 4.3. Write program for matrix multiplication using linked list	{0,0,0,1,0},	
{2,8,0,0,1,0}, {0,0,4,0,0,0} };  4.1. Write a program for the dense matrix multiplication 4.2. Represent them using array of linked lists 4.3. Write program for matrix multiplication using linked list	{0,5,0,2,0,0},	
{0,0,4,0,0,0} };  4.1. Write a program for the dense matrix multiplication 4.2. Represent them using array of linked lists 4.3. Write program for matrix multiplication using linked list	{0,0,1,0,0,5},	
4.1. Write a program for the dense matrix multiplication 4.2. Represent them using array of linked lists 4.3. Write program for matrix multiplication using linked list	{2 , 8 , 0 , 0 , 1, 0 },	
<ul><li>4.1. Write a program for the dense matrix multiplication</li><li>4.2. Represent them using array of linked lists</li><li>4.3. Write program for matrix multiplication using linked list</li></ul>	{0,0,4,0,0,}	
4.2. Represent them using array of linked lists 4.3. Write program for matrix multiplication using linked list	};	
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4.3. Write program for matrix multiplication using linked list	· · · · · · · · · · · · · · · · · · ·	
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## Note:

- Students need to practice all questions in the assignments
- TAs will assign a random question in the lab