# DATA STRUCTURES AND ITS APPLICATIONS

**Shylaja S S & Kusuma K V**

Department of Computer Science & Engineering

# DATA STRUCTURES AND ITS APPLICATIONS

## Programs on Binary Trees

**Shylaja S S**

Department of Computer Science & Engineering

```
//Returns the smallest element in Binary Search Tree
int minimum(struct tnode *t)
{
  while(t->left!=NULL)
   t=t->left;
  return(t->data);
}
```

```c
//Returns the largest element in Binary Search Tree
int maximum(struct tnode *t)
{
  while(t->right!=NULL)
   t=t->right;
  return(t->data);
}
```

```c
//Computes the height of a Binary Tree
int height(struct tnode *t)
 {
   if(t==NULL)
    return -1;
   if((t->left==NULL)&&(t->right==NULL))
    return 0;
   return (1+max(height(r->left),height(r->right)));
 }
```

```
//Count the number of leaf nodes in a Binary Tree
int leafcount(struct tnode *t)
{
  if(t==NULL)
   return 0;
 if((t->left==NULL)&&(t->right==NULL))
   return 1;
 int l=leafcount(t->left);
 int r=leafcount(t->right);
 return(l+r);
}
```

# THANK YOU

**Shylaja S S**

Department of Computer Science & Engineering

**shylaja.sharath@pes.edu**