



Data Structures and its Applications

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DATA STRUCTURES AND ITS APPLICATIONS

Implementation of TRIE Trees :

- Display Operation
- Deletion Operation
- Search Operation

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```
void display(struct trienode *curr)
{
    int i,j;
    for(i=0;i<255;i++)
    {
        if(curr->child[i]!=NULL)
        {
            word[length++]=i;
            if(curr->child[i]->endofword==1)//if end of word
            {
                printf("\n");
                for(j=0;j<length;j++)
                    printf("%c",word[j]);
            }
            display(curr->child[i]);
        }
    }
    length--;
    return ;
}
```

```
void delete_trie(struct trienode *root, char *key)
{
    int i,index,k;
    struct trienode *curr;
    struct stack x;
    curr=root;

    for(i=0;key[i]!='\0';i++)
    {
        index=key[i];
        if(curr->child[index]==NULL)
        {
            printf("The word not found..\n");
            return;
        }
        push(curr,index);
        curr=curr->child[index];
    }
    curr->endofword=0;
    push(curr,-1);
```

```
while(1)
{
    x=pop();
    if(x.index!=-1)
        x.m->child[x.index]=NULL;
    if(x.m==root)//if root
        break;
    k=check(x.m);
    if((k>=1) || (x.m->endofword==1))
        break;
    else
        free(x.m);
}
return;
}
```

```
int search(struct trienode * root,char *key)
{

int i,index;
struct trienode *curr;
curr=root;

for(i=0;key[i]!='\0';i++)
{
    index=key[i];

    if(curr->child[index]==NULL)
        return 0;
    curr=curr->child[index];
}
if(curr->endofword==1)
    return 1;
return 0;
}
```



THANK YOU

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