



**INSTITUTE OF TECHNOLOGY,
NIRMA UNIVERSITY**

2CS701 Compiler Construction

PRACTICAL 8

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Semester : 7th

Teacher's Signature :

Aim : To implement a Type Checker.

```
#include<stdio.h>
#include<stdlib.h>
int main()
{
    int n, i, k, flag=0;
    char vari[15], type[15], b[15], c;

    printf("Enter the number of variables:");
    scanf(" %d",&n);

    for(i=0;i<n;i++)
    {
        printf("Enter the variable[%d]:",i);
        scanf(" %c",&vari[i]);

        printf("Enter the variable-type[%d](float-f,int-i):",i);
        scanf(" %c",&type[i]);

        if(type[i] == 'f')
            flag = 1;
    }

    printf("Enter the Expression(end with $):");
    i=0;

    getchar();

    while((c=getchar()) != '$')
    {
        b[i]=c;
        i++;
    }

    k=i;

    for(i = 0; i < k; i++)
    {
        if( b[i] == '/')
        {
            flag = 1;
            break;
        }
    }

    for(i = 0; i < n; i++)
    {
        if(b[0] == vari[i])
        {
            if(flag == 1)
            {
                if(type[i] == 'f')
                {
                    printf("\nthe datatype is correctly defined...\n");
                }
            }
        }
    }
}
```

```

        break;
    }
    else
    {
        printf("Identifier %c must be a float
typee..!\n",vari[i]);
        break;
    }
}
else
{
    printf("\nthe datatypee is correctly defined..!\n");
    break;
}
}
}
return 0;
}

```

OUTPUT :

Output

Clear

^ /tmp/Bx2GCxcSl5.o

Enter the number of variables:3
Enter the variable[0]:a
Enter the variable-type[0](float-f,int-i):f
Enter the variable[1]:b
Enter the variable-type[1](float-f,int-i):i
Enter the variable[2]:c
Enter the variable-type[2](float-f,int-i):i
Enter the Expression(end with \$):c=a+b\$
Identifier c must be a float typee..!
|