Name: Pratyush Khare

Roll No: 20BCE519

Subject: Compiler Construction

Practical 8

Aim: To implement a Type Checker.

Code:

```
#include<stdio.h>
#include<stdlib.h>
int main()
{
   int n,i,k,flag=0;
   char vari[15],typ[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",&typ[i]);
      if(typ[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(typ[i]=='f')
         {
            printf("\nthe datatype is correctly defined..!\n");
            break;
         }
         else
         {
            printf("Identifier %c must be a float type..!\n",vari[i]);
            break;
         }
      }
      else
      {
         printf("\nthe datatype is correctly defined..!\n");
         break;
```

```
        }
      }
    }
    return 0;
}
```

Output: