**EXPERIMENT NO.7**

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**ROLL NO**: 18CO32

**Aim** : To find first () of a grammer.

**PROGRAM :**

#include <stdio.h>

#include <ctype.h>

void Find\_First(char[], char);

void Array\_Manipulation(char[], char);

int limit;

char production[25][25];

int main()

{

char option;

char ch;

char array[25];

int count;

printf("\nEnter Total Number of Productions:\t");

scanf("%d", &limit);

for (count = 0; count < limit; count++)

{

printf("\nValue of Production Number [%d]:\t", count + 1);

scanf("%s", production[count]);

}

do

{

printf("\nEnter a Value to Find First:\t");

scanf(" %c", &ch);

Find\_First(array, ch);

printf("\nFirst Value of %c:\t{ ", ch);

for (count = 0; array[count] != '\0'; count++)

{

printf(" %c ", array[count]);

}

printf("}\n");

printf("To Continue, Press Y:\t");

scanf(" %c", &option);

} while (option == 'y' || option == 'Y');

return 0;

}

void Find\_First(char \*array, char ch)

{

int count, j, k;

char temporary\_result[20];

int x;

temporary\_result[0] = '\0';

array[0] = '\0';

if (!(isupper(ch)))

{

Array\_Manipulation(array, ch);

return;

}

for (count = 0; count < limit; count++)

{

if (production[count][0] == ch)

{

if (production[count][2] == '$')

{

Array\_Manipulation(array, '$');

}

else

{

j = 2;

while (production[count][j] != '\0')

{

x = 0;

Find\_First(temporary\_result, production[count][j]);

for (k = 0; temporary\_result[k] != '\0'; k++)

{

Array\_Manipulation(array, temporary\_result[k]);

}

for (k = 0; temporary\_result[k] != '\0'; k++)

{

if (temporary\_result[k] == '$')

{

x = 1;

break;

}

}

if (!x)

{

break;

}

j++;

}

}

}

}

return;

}

void Array\_Manipulation(char array[], char value)

{

int temp;

for (temp = 0; array[temp] != '\0'; temp++)

{

if (array[temp] == value)

{

return;

}

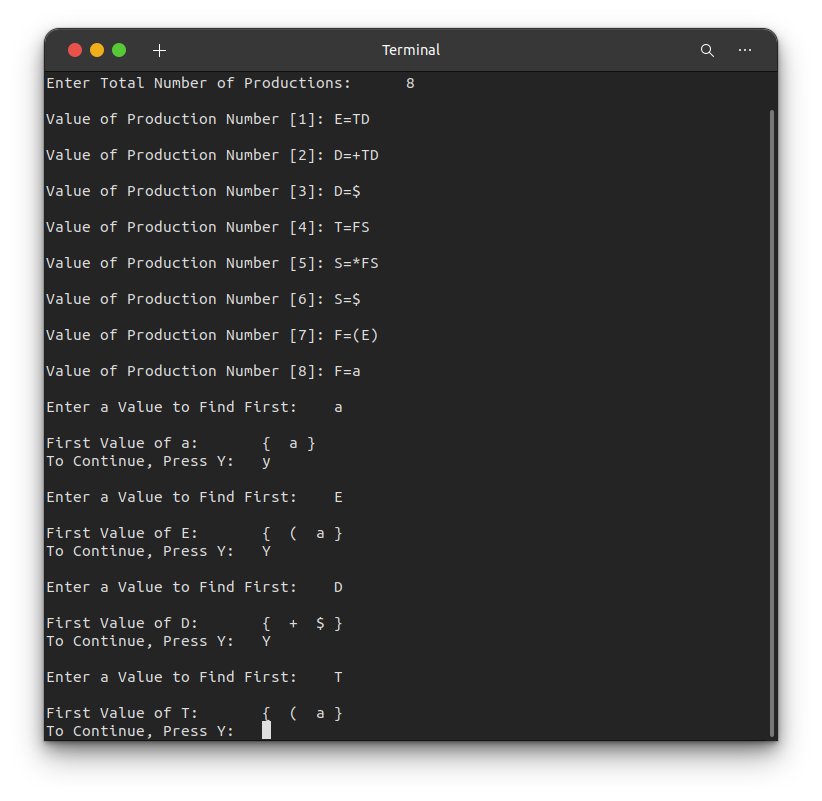
}

array[temp] = value;

array[temp + 1] = '\0';

}

**OUTPUT :**

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