Minimal to Canonical Fo

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Canonical Form is also called standard form, have all the variable in normal or complimented form in each **minterm**.

There are 3 steps for conversion of minimal form to canonical form.

- Find the Total Number of variable present in minimal form.
- Find the variables absent in each minterm.
- Try to apply operation for converting min to canonical term using one(1) or zero(o) logic.

Conversion of Sum of Products (SOP) form to Canonical Form –

```
Input :
Y=A+B'C
Output :
(A.B.C)+(A.B.C')+(A.B'.C)+(A.B'.C')+(A'.B'.C)
```

Explanation –

- **Step-1:**
  Find the Total Number of variable present in minimal form like in this variables present are A, B, C.
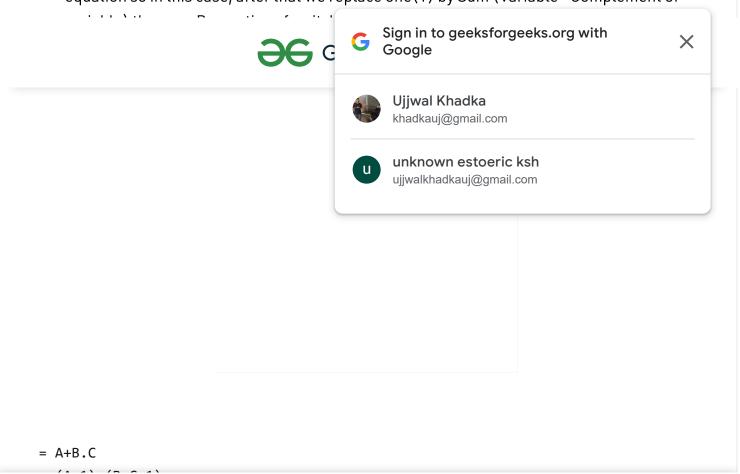- **Step-2:**
  Find the variables absent in each term like in this in this variable absent in minterm(0) is B and C and variable absent in minterm(1) is A.
- **Step-3:**
  Try to apply operation for converting min to canonical term using one(1) or zero(o) logic. In

equation so in this case, after that we replace one(1) by Sum (Variable +Complement of

```
= A+B.C
```

Conversion of Product of Sums(POS) form to Canonical Form –

Set of rules are same as stated above.

Example-2:

```
Input :
Y=(A+B+C).(A'+C)

Output :
(A+B+C').(A'+C+B).(A'+C+B')
```

Explanation –

1. **Step-1:**
   Find the Total Number of variable present in minimal form like in this variables present are

3. **Step-3:**

resultant equation so in this case, afte
Complement of variable) then use Pro

Conversion steps –

```
= (A+B+C).(A'+B)
= (A+B+C').(A'+(B.B')+C)
= (A+B+C').(A'+C+B).(A'+C+B')
```

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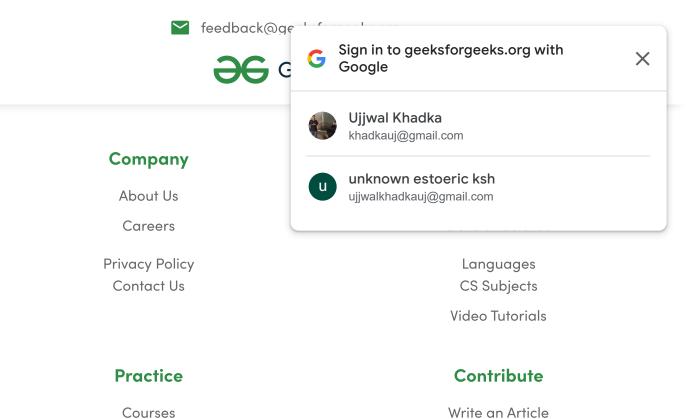
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