-rse function theorem. $\exists \; h(z_1, z_2, \cdots z_{n-2}) = z_{n-1}$ s.t

$h(z_1^\circ, \cdots z_{n-2}^\circ) = z_{n-1}^\circ$. $\quad \gamma(z_1^\circ, \cdots z_{n-2}^\circ, z_{n-1}^\circ) = 0$.

$$
\begin{array}{l}
\{f = g = 0\} \subset \mathbb{C}^n \\
\quad \downarrow \pi \\
\{\gamma = 0\} \subset \mathbb{C}^{n-1} \\
\quad \downarrow \pi \quad \leftarrow \text{finite sheeted branched covering.} \\
\mathcal{U}, \text{nbd of } 0 \subset \mathbb{C}^{n-2}
\end{array}
$$

Let V be an open set s.t $V \subset \mathcal{U}$ and $V \ni (z_1^\circ, \cdots z_{n-2}^\circ)$.
Consider

$$\{f(z_1, z_2, \cdots h(z_1, \cdots z_{n-2}), z_n) = g(z_1, \cdots h(z_1, \cdots z_{n-2}), z_n) = 0\}$$

Let k be the greatest common divisor of f & g.

$\Rightarrow \quad f = f' k$

$\qquad\; g = g' k.$

$\Rightarrow \{f = g = 0\} = \{f' = g' = 0\} \cup \{k = 0\}.$

$\Rightarrow \quad f'$ & g' are relatively prime.

$\Rightarrow$ By the existence of the resultant.

$\quad \alpha' f' + \beta' g' = \gamma' \in \mathcal{O}_{n-2}$

$\Rightarrow \quad \pi(\{f = g = 0\}) \subset \underbrace{\pi(\{f' = g' = 0\})}_{\{\gamma' = 0\}} \cup \pi(\{k = 0\}) = \mathbb{C}^2$ locally

$\Rightarrow$ On $V - (\{\gamma' = 0\} \cup \{D(k) = 0\})$, $\quad \{f(z_1, \, h(z_1 \cdots z_{n-2}), z_n) = g(\quad) = 0\}$