since, for $0 < |z_1| \leq \delta$, $\left| \dfrac{dh(z_1, z_2)}{h(z_1, z_2)} \right| < \infty$.

$\Rightarrow$ By Riemann extension theorem, $\varphi_i(z)$ can be extended to $\{ |z_1| \leq \delta \}$.

We may then set

$$F(z_1, z_2) = z_2^d + p_1(\varphi_1(z_1), \cdots \varphi_d(z_1))\, z_2^{d-1} + \cdots + p_d(\varphi_1(z_1), \cdots \varphi_d(z_1))$$

a polynomial in z_1 whose roots are for fixed $z_1 \neq 0$ just the points $(z_1, z_{2,\nu}(z_1))$, and which is holomorphic in the bicylinder. The divisor of F is $\overline{D}$, and we are done. Q.E.D.

$$F(z_1, z_2) = \prod_{\nu=1}^{d} (z_2 - z_{2\nu}(z_1)) = g(z_1, z_2)$$ in the previous practice. $g(z_1, z_2)$ is holomorphic on $\{(z_1, z_2) : |z_1| \leq \delta \quad |z_2| \leq \epsilon\}$. and $F(z_1, z_2)$ is holomorphic on it, too.

$\Rightarrow$ $(F = 0) \supset D$ and $(F = 0) - \{(0,0)\} = D$.

$\Rightarrow$ $(F = 0) = \overline{D}$

Since $\mathbb{C}^n - V = \mathbb{C}^n - \mathbb{C}^K = (\mathbb{C}^{n-K} - \{0\}) \times \mathbb{C}^K$, for simplicity, $n = 4$, $K = 2$, then

assume D does not contain the z_4-axis.

$\mathbb{C}^2 = V \subset (z_1, z_2, z_3)$.