$\Rightarrow$ The volume form is given by $\alpha_1 \wedge \beta_1 \wedge \alpha_2 \wedge \beta_2 \cdots \alpha_n \wedge \beta_n$. $\lrcorner$

$\ulcorner$

φ (1,0) type.

$$\varphi = \alpha + i\beta$$

$$(\alpha + i\beta)\left(\frac{\partial}{\partial x} - i\frac{\partial}{\partial y}\right)$$

$$= \alpha\left(\frac{\partial}{\partial x}\right) + \beta\left(\frac{\partial}{\partial y}\right) + i\left(\beta\left(\frac{\partial}{\partial x}\right) - \alpha\left(\frac{\partial}{\partial y}\right)\right) = 0$$

$$\Rightarrow \quad \alpha\left(\frac{\partial}{\partial x}\right) + \beta\left(\frac{\partial}{\partial y}\right) = 0$$

$$\beta\left(\frac{\partial}{\partial x}\right) - \alpha\left(\frac{\partial}{\partial y}\right) = 0$$

Suppose α & β are linearly dependent.

$$\alpha = a\beta. \qquad a\beta\left(\frac{\partial}{\partial x}\right) + \beta\left(\frac{\partial}{\partial y}\right) = 0$$

$$\beta\left(\frac{\partial}{\partial x}\right) - a\beta\left(\frac{\partial}{\partial y}\right) = 0.$$

$$\Rightarrow a^2\beta\left(\frac{\partial}{\partial y}\right) + \beta\left(\frac{\partial}{\partial y}\right) = 0 \Rightarrow \beta\left(\frac{\partial}{\partial y}\right) = 0.$$

$\Rightarrow \beta\left(\frac{\partial}{\partial x}\right) = 0 \Rightarrow \alpha = \beta = 0$ Contradiction.

$\Rightarrow$ α & β are linearly independent. $\lrcorner$