$$u_t - f(x,y,t,u,u_x,u_y)_x - g(x,y,t,u,u_x,u_y)_y = 0 \longrightarrow$$
$$\bar{u}_{\bar{t}} - \bar{f}(\bar{x},\bar{y},\bar{t},\bar{u},\bar{u}_{\bar{x}},\bar{u}_{\bar{y}})_{\bar{x}} - \bar{g}(\bar{x},\bar{y},\bar{t},\bar{u},\bar{u}_{\bar{x}},\bar{u}_{\bar{y}})_{\bar{y}} = 0.$$