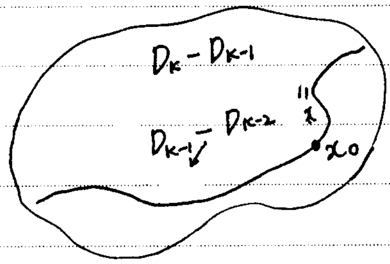
Again since $\{\sigma_1, \sigma_2 \cdots \sigma_k\}$ is generic, we can find a point x'' near x_0 s.t



$\sigma_1, \sigma_2, \cdots \sigma_{k-1}$ are linearly independent at x'' and $x'' \in D_k - D_{k-1}$.

At x'',

$$
\begin{array}{lllll}
 & & k-1, & k, & k+1 \\
\sigma_1 = \sigma_1 + 0 & & & & +0 \\
\sigma_2 = 0 + \sigma_2 + 0 + & & & & +0 \\
\vdots \quad \vdots \quad \vdots & & & & \\
\sigma_{k-1} = 0 + 0 + \cdots & & +\sigma_{k-1} + 0 + \cdots & & +0 \\
\sigma_k = *\sigma_1 + *\sigma_2 + \cdots & & +*\sigma_{k-1} + 0 + \cdots & & +0 \\
\sigma_{k+1} = *\sigma_1 + \cdots & & +*\sigma_{k-1} + *\sigma_k + 0 + & & +0 \\
\vdots \quad \vdots & & \vdots & & \\
\sigma_n = *\sigma_1 + \cdots & & +*\sigma_{k-1} + *\sigma_k + 0 + \cdots & & +0
\end{array}
$$

$$
\Rightarrow \iota(x'') = \begin{array}{c} \\ \\ \\ \\ k-1 \\ k \\ k+1 \\ \vdots \\ n \end{array}
\left(\begin{array}{l}
 \qquad\qquad\qquad\quad k-1, \;\; k \;\;\; k+1 \\
(1, 0, \cdots\cdots 0 \;\; * \;\cdots\; *) \\
(0, 1, \cdots\cdots 0, \;\; * \;\cdots\; *) \\
\;\vdots \quad \vdots \\
(0, 0 \cdots\cdots 1, \;\; * \;\; * \cdots *) \\
(0, 0 \cdots\cdots 0, \;\; 0, * \cdots *) \\
(0, 0, \cdots\cdots 0. \;\; 0, 0 \cdots 0) \\
\;\vdots \\
(0, 0, \cdots\cdots 0, \;\; 0, 0 \quad\;\; 0)
\end{array}\right) \in \sigma_1(V) \subset G(k, n).
$$

We don't need this.

(iii) $x \in D_{k-2} - D_{k-3}$

$$
\Rightarrow \iota(x) = \begin{array}{c} \\ \\ \\ \\ k-3 \\ k-2 \\ k-1 \\ k \end{array}
\left(\begin{array}{l}
 \qquad\qquad\qquad k-3 \;\; k-2 \\
(1, 0, \cdots\cdots 0, \;\; * \cdots *) \\
(0, 1, \cdots\cdots 0, \;\; * \cdots *) \\
\;\vdots \\
(0, 0, \cdots\cdots 1, \;\; *, \cdots *) \\
(0, 0, \cdots\cdots 0. \;\; 0, * \cdots *) \\
(0, 0, \cdots\cdots 0. \;\; 0, * \cdots *) \\
(0, 0 \cdots\cdots 0, \;\; 0. * \cdots *)
\end{array}\right)
$$