DIFFERENCE OF NOTATIONS

The following is a list of notations we used in class which are different from those given in the book of Hoffman-Kunze.

notations used in class	notions used in the book HK	meaning or comment
$\mathrm{Mat}_{m\times n}(F)$	$F^{m\times n}$	Set of all $m\times n$ matrice with entries in F
$\mathrm{GL}_n(F)$		Set of all invertible $n\times n$ matrice with entries in F
Vect_F		all vector spaces over F
injective	one$-$to$-$one	
surjective	onto	
linear map	linear transformation	"linear transformation" is mentioned but not frequently used in class
linear map	linear operator	A linear map from a vector space to itself
$\mathrm{Hom}_F(V,W)$	$L(V,W)$	all $F-$linear maps from V to W
$\mathrm{End}_F(V)$	$L(V,V)$	all $F-$linear maps from V to V
$\mathrm{Ker}(T)$	null space of T	
$\dim_F \mathrm{Ker}(T)$	nullity of T	
$\mathrm{Im}(T)$	$\mathrm{Range}(T)$	both are used
Injective	non$-$singular	injective linear map
$\mathrm{Ann}(W)$	W^0	annihilator of W
$F^{\mathbb{N}}$	F^∞	formal power series algebra over F
$F[[x]]$	F^∞	formal power series algebra over F
$\mathrm{Hom}_{m-\mathrm{lin}}(V^m;K)$		all m $-$ linear maps from V^m to K
$\mathrm{Alt}(V^m;K)$		all alternating maps from V^m to K
eigenvalue	characteristic value	
eigenvector	characteristic vector	
eigenspace	characteristic space	
$E_T(c)$		$\ker(T-cI)$, eigenspace of T w.r.t. c
χ_T		characteristic polynomial of a linear operator T
μ_T		minimal polynomial of a linear operator T

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