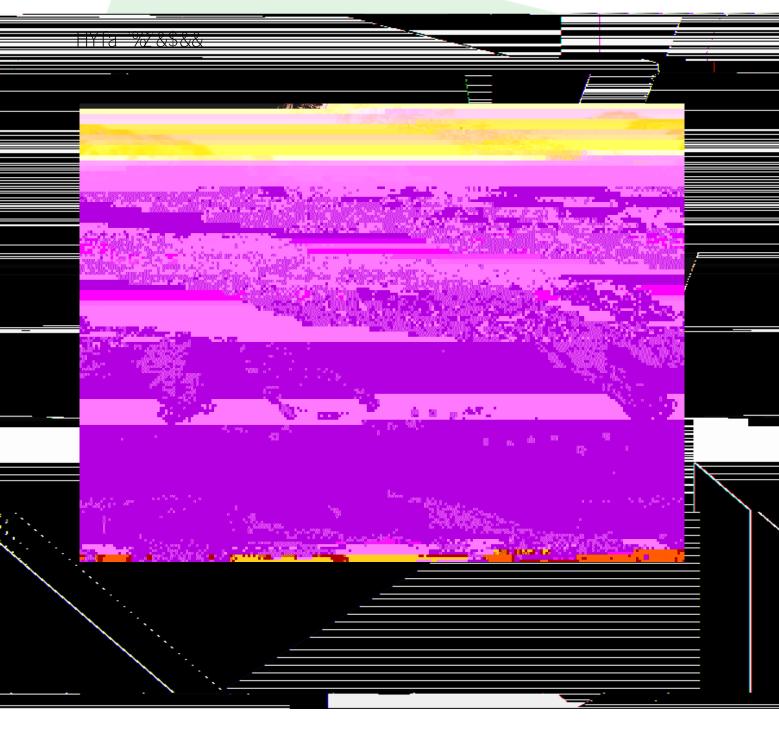
# **EDST6704**

# 9b[`]g\`Ug`Ub`5XX]h]cbU``@Ub[iU[Y`cf`8]U`YWhAYh\cX`%



EDST6704 // Term 1, 2022 // published at 14-01-2022 © UNSW Sydney, 2022

# 7 ci fgY<sup>-</sup>Cj Yfj ]Yk

### GHJZZ7cbHJWhi8YHJ]`g

#### 7 cbj Ybcfg

B Ua Y	9a U]`	5j U]`UV]`]m	@cWUhjcb	D\cbY
5b[Y`U'? Ub[	<u>Ub[Y`U"_Ub[4_i bgk "YXi "Ui_</u>	9a U]`'hc`fYei Ygh a YYh]b[		

#### GWXcc`7cbHJWhi=bZcfaUh]cb

GVX.cc``cZ9XiVUHjcb 5fhgž'8Yg][b'UbX'5fVX]hYWhifY ; fcibX': `ccfž'A cfjYb'6fckb'6i]`X]b['fl&\$Ł

H. 'Ž \* %'f&Ł'- ' , ) '%- ++

9. YXi WUhjcb4 i bgk "YXi "Ui

K. \hhdg.#k k k "Ufng"i bgk "YXi "Ui #YXi WUh]cb

### 5W\_bck `YX[ Ya YbhcZ7ci bhfm

I BGK '5ffgž8Yg][b'UbX'5fW]]YWi fY'?Ybg]b[hcb'UbX'DUXX]b[hcb'WJa di gYg'UfY'Vi ]`hcb'5Vcf][]bU` @UbXg''K Y'dUmici f'fYgdYWg'hc'h\Y'6]X'][U``UbX'; UX][U``dYcd`Yg'k \c'UfY'h\Y'7 i ghcX]Ubg'cZh\YgY``UbXg'' K Y'UW\_bck `YX[Y'h\Y'5Vcf][]bU``UbX'HcffYg'GHfU]h=g`UbXYf'dYcd`Ygž'h\Y': ]fgh5i gHfU`]Ubgžk \cgY``UbXgž k ]bXg'UbX'k UhYfg'k Y'U```bck 'g\UfYž'UbX'dUmifYgdYWihc'h\Y]f'i b]ei Y'j U`i Ygž'UbX'h\Y]f'Wcbh]bi ]b[`'UbX YbXi f]b[`'W`hi fYg'k \]W.`XYYdYb'UbX'Ybf]W.'h\Y``]ZY'cZci f'bUh]cb'UbX'Wca a i b]h]Yg''``

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	ghfiWhifY`cZh\Y`WcbhYbhUbX`hYUW\]b[`ghfUhY[]Yg`cZh\Y`hYUW\]b[`UfYU"	
&"&"%	Cf[Ub]gY`WcbhYbh`]bhc`Ub`YZZYWhjjY``YUfb]b[`UbX`hYUWX]b[`gYeiYbWY"	%ž <sup>:</sup> &
&"' "%	I_gY`W`ff]W`i a žUggYgga YbhUbX`fYdcfh]b[`_bck`YX[Y`hc`XYg][b``YUfb]b[	&
	gYei YbWfg'UbX'`Yggcb'd`Ubg"	
&"( "%	8Ya cbglfUlY`VfcUX`_bck`YX[Y`cZzi bXYfglUbX]b[`cZUbX`fYgdYWiZcf`5Vcf][]bU``UbX	
	HcffY`GlfU]h=g`UbXYf`dYcd`Y`hc`dfca chY`fYWcbW}]Uh]cb`VYhk YYb`=bX][Ybci g`UbX`bcb!	
	=bX][Ybci g`5i ghfU`]Ubg"	
&") "%	?bck 'UbX'i bXYfgtUbX'`]tYfUWnUbX'bi a YfUWnitYUWX]b[ 'gtfUtY[ ]Yg'UbX't\Y]f	%
	Udd`]WUhjcb']b'hYUVX]b['UfYUg"	
&"*"%	=a d`Ya YbhHYUWX]b[ 'ghfUHY[ ]Yg'Zcf'i g]b[ `=7 H'hc YI dUbX'W ff]W `i a ``YUfb]b[	%ž"&
	cddcfhi b]h]YgʻZcf`ghi XYbhg"	
' "%"%	GYh`YUfb]b[ `[ cU`g`h\Uhdfcj ]XY`UW\]Yj UV`Y`W\U``Yb[ Yg`Zcf`gh XYbhg`cZj Ufm]b[	%ž"&
	WX UFUWYY f]gh]Wg"	
' "&"%	D`Ub``Yggcb`gYei YbWYg`i g]b[`_bck`YX[Y`cZgh XYbh`YUfb]b[žWcbhYbhžUbX	&
	YZYW]jY'HYUWX]b['ghfUHY[]Yg"	
' "' "%	=bWiXY`U`fUb[Y`cZhYUWX]b[`ghfUhY[]Yg"	

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cZdfc[fUa a ]b[žghi XYbhZYYXVUW\_'UbX'fYdcfh]b["'5```cZh\]g'bYYXg'hc'VY'hUi [\h']b'U'dfUWf]WU'ž\UbXg'cb Ybj ]fcba Ybhk \YfY'ghi XYbhg'UfY'[]j Yb'YI d`]Wfha cXY`]b['UbX'cddcfhi b]h]Yg'hc'k cf\_'Wc``UVcfUh]j Y`m']b'U gi ddcfh]j Y'Ybj ]fcba Ybhhc'XYj Y`cd'h\Y]f'i bXYfghUbX]b['UbX'g\_]``g"'Ghi XYbhg\ci `X'U`gc'ZYY``Wca ZcfhUV`Y'hc X]gWi ggž'ei Ygh]cb'UbX'fYZYWfcb'h\Y]f'ck b'YI dYf]YbWfg'UbX``YUfb]b["

HYUW ]b[ GhfUhy[ ]Yg

Ghi XYbhi WibhYX UWnji ]h]Yg UbX cddcfhi b]h]Yg Zcf Wi]h]WU UbX fYZYWnji Y Yb[U[Ya Ybhik]h\ h\Y WobhYbhUbX a Yh\cXc`c[mUbX`d\]`cgcd\mcZ95@#8 'hYUW\]b[`k]``Zcfa 'h\Y VUg]g`cZh\Y Woi fgY"

@YWiffYg'k]``YId`]WhmihYUWX'95@#8'dYXU[c[mUbX'acXY``hYUVX]b['ghfUhY[]Yg"

Cddcfhib]h]YgʻZcfʻ&]bhWebghfi Wf]cbʻcZ`YggcbgʻUbX`dfc[fUagʻk]``U``ck`ghi XYbhgʻhcʻVY`gi ddcfhYX`]bʻh\Y]f `YUfb]b["

Cb`]bY`YUfb]b[`k]```]bWiXY`fY[i`Ufž`Wf]h]WU``UbX`fYZYWf]jY`fYgdcbgYg`fc`fYUX]b[g`cb`6`UW\_VcUfX"

DYYf'HYUWX]b[']b'U'g]a i `UHYX'WUggfcca 'gYH]b["

# 5ggYgga Ybh

5ggYgga YbhˈtJg_	K Y][ \h	8iY`8UHY	7cifgY`@YUfb]b[ CihWcaYgʻ5ggYggYX
%"`@Yggcb`d`Ub	(\$1	K YXbYgXUm&'	%ž`&ž`' ž`( ž`) ž`*
&"`I b]hcZk cf_`ci h]bY	*\$I	K YXbYgXUm&+#(#&\$&&	%ž`&ž`' Ž`( Ž`) Ž`*

# 5ggYgga Ybh% @Yggcb d`Ub

8i Y'XUHY. K YXbYgXUm& # #&\$&&

- 6f]YZm]XYbh]ZmUbX`XYgWf]VY`ghfYb[ h\g`h\Y`YI ]gh]b[ `? @5``Yggcb`\UX`Zcf`95@#8``YUfbYfg"`f#" " h`dUdŁ
- =XYbh]ZmUbX`YId`U]b`h\Y`aU]b`W**\U``Yb[Yg**`h\Y`cf][]bU```Yggcb`dcgYg`Zcf`95@#8``YUfbYfgž`fYZ/ff]b[ hc`h\Y``]b[i]gh]WUbX`W`hfU``XYaUbXg`cb`95@#8``YUfbYfg"`f#'`" h`dJdŁ

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K YY_`+`9I d`]Wfnm HYUWX]b[`fYUX]b[	@YWhifY	<ul> <li>H\fYY'7iY]b['GmghYag</li> <li>cif'FYgcifWYg'AcXY`</li> <li>DfYž'8if]b['UbX'Dcgh'FYUX]b[</li> </ul>

### FYgci fWfg

#### DfYgWf]VYX F Ygci fWfg

#### Cb`]bY'@YUfb]b[ 'D`UhZcfa g#=7H']b'h\Y'WUggfcca

- H\Y: `]ddYX'7`Uggfcca.' \hd.#k k "hYUW\YfgHUbXUfXg"U]hg`"YXi "Ui #≅`i ghfUh]cbg#]]Yk =€ D#€ D\$\$%+' #bXYI "\ha\_`
- Ghi XYbhihYUWXYfg'UfY YbWci fU[YX'hc'gYhi d'h\Y]f'ck b'V'c['flhi]g'ZYYE'Uh'9Xi V'c[.'
   <u>\htd.##YXi V'c[g"cf[#</u>hc'WfYUhY'UbX'g\UfY'fYgci fWfg'UbX''Yggcbg'h\YmWfYUhY''''
- DUX`Yh`5b`cb`]bY`d`UhZcfa 'Zcf`WfYUhY`]bhYfUWfj Y`UbX`Wc``UVcfUhj Y`WUggfcca g \htdg.##dUX`Yh'Wca #
- E i ]n`Yh`5b`cb`]bY`d`UhZcfa`Zcf`gi ddcfh]b[`ghi XYbhXYj Y`cda YbhcZk cfX`\_bck `YX[ Y`UbX`\_Ym hYfa g`<u>\htdg.##ei ]n`Yh'Wca #UhYgh</u>
- 7 Ubj U. 7 fYUh]b[ 'dcghYfg'UbX'ch\Yf'j ]gi U``hYI hg'<u>k k k "WUbj U"Wca</u>

#### FYei ]fYX FYUX]b[g

DUI`]bY`; ]VVcbg`f&\$\$-E"`7\_X]ZdY >VRc\_Vcd3TRUV^ZT >ZeVcRTj R\_U YZ\_\Z\_X >VRc\_Z\_XZ\_eYV5YR]]V\_XV K`\_VZ'<Y]bYa Ubb

7 > TR]Vd`f%--(Ł"`7iff]W``ia`7cfdcfUh]cb

575F5`f&\$%(Ł'7\_X]ZdY Rd R\_3UUZeZ\_R] >R\_Xf RXV`c6ZR]VTe\_VRTYVc\_Vd`fcTV, 73>!6`gVcgZ/h R\_U RUgZIVž<u>htd.#k k k "UWUfU"YXi "Ui #W ff]W`i a #ghi XYbfsX]i Yfg]m#YU`XShYUVXYfSfYgci fWY"\ha`</u>

#### : i fh\Yf`FYUX]b[g

5 bghYmžA "/ '6i ``ž; "`f&\$\$\*'L"HVRTYZ\_X R\_U ]VRc\_Z\_X ^ f]@]@vcRTZ/d, 5 YR\_XZ\_X @^ Vdł TYR\_XZ\_X ]@vcRTZ/dž 7 i ff]W `i a `DfYggžA Y`Vci fbY"

5 Htk ccXž6" f&\$\$) Ł V]]Z\_X eYV eef eY RS`fe3S`cZXZ\_R] YZde`qiž5```UbX`I bk]bž7 fck g`BYgh"

8 fc [ Už'@"/ '<i a d\fYmž'G"'f&\$\$) Ł'9 dR^ ^ Rc R\_U eYV 7 cXR\_ZdReZ \_ ` W? VR\_Z\_Xž'HUf[ YhhYI hgž'6Yffmž 5 i ghfU`]U"

8i ZZ]Whiž:D"'f&\$\$) Ł" 6 VdZX\_Z\_X ]VRc\_Z\_X Wc 6 ZqVcdV 5 ]Rddc``^ dž:D9H5ž'BGK

: ]b[Yfž; "žFiggY``ž; "ž>Ua]Ygcb!DfcWcfžF"/`FiggY``žB"`f&\$\$\*E` cR\_dWc^ Z\_X >VRc\_Z\_X h ZeY;5 ? R\Z\_X; : RaaV\_"`DYUfgcb`5ighfU`]U

; ]VVcbgžD"f&\$\$&{" TRWJUZ\_X >R\_XfRXV TRWJUZ\_X >VRc\_Z\_XI < Y]bYa Ubb

<Ua a cbXžA "`UbX`A ]``Yfž>"`f&\$%) Ł'5]Rddc``^d`W`ddZSZZ; faa`œZ\_X RecZd\ 73> def UV\_edžD9H55. GnXbYm

< Uff]gcbžB"'f&\$\$, t" VRTYZ\_X R\_U ]VRc\_Z\_X Z\_ ; \_UZVV\_` f d VUf TReZ \_žC I ZcfXžGmXbYm"</pre>

< YbXYfgcbžF "`f&\$%&L" VRTYZ\_X >ZeVcRTZ/dž VURX` XZ/d R\_U 6ZgVcdZg Z\_e/V ? ZUU]V J VRcdžC I Zcf I b]j Yfg]hmDfYggž5i ghfU`]U

<YfmVYf[ ž`A "`f&\$%&L` VRTYZ\_X 7\_X]ZdY Z\_ ? RZ\_decVR^ 5]RddVd"`D9H55.`GmXbYm</pre>

<mXYžA "ž7UfdYbhYfž@"/`7cbkUmžF"`f&\$%\$Ł"6ZgVcdZg R\_U;\_T]fdZ Z 3fdecR]ZR TY``]d"`C I ZcfX I b]j Yfg]hmDfYggž5i ghfU`]U

? bUddžD7 K Uh\_]bg'A "'f%--(Ł"3 W\_TeZ\_R]? `UV]Z\_T`\_eViel VieR\_U9cR^ ^ Rc'fCb`]bY'IBGK 'Am 7 cifgYŁ

? bUddžD"'/ `K\_Uh\_]bgžA "`f&\$\$) Ł" 9 V\_dVł Vieł 9 dR^ ^ Rc'I\_BGK `DfYggž7 \UdhYf`%! `3\_9 V\_dV 4 RdVU ? `UV] `W&R\_Xf RXV`fC b`]bY`I\_BGK `A\_m7 ci\_fgYŁ

A Ufhlbž? "'f&\$\$, Ł"H\Y']bhYfgYWflcb'cZ5Vcf][]bU``\_bck `YX[Ygž5Vcf][]bU```]hYfUWfYg'UbX'bYk ``YUfb]b[ dYXU[c[mZcf'5Vcf][]bU``gh XYbhg"'=b`<YU`mž'5`fPX"Ł'?f]@JZVcRTZ/dR\_UUZgVcdZg Z\_VUfTR@Z\_, @Vh aVURX`XZ/dWcViaR\_UZ\_X]R\_UdTRaVdžDd')-!, %"CIZcfX'Ib]jYfg]mDfYggžAY`VcifbY"

B]Wc``žJ"'/ FcVYfhgžJ"'f&\$\$' Ł" R\Z\_X R T]` dVc]`` \ Re>ZeVcRefcV 4 RdVU c` XcR^ džD9H5 žBYk hck b`89H

Df]WYž? 'f&\$%&Łž3S` cZXZ\_R] R\_U ` ccVd ecRZe;d]R\_UVc7UfTReZ\_, 3\_;\_ec`UfTeZ\_WceYV VRTYZ\_X c`WddZ\_ž7Ua Vf]X[Y'I b]j Yfg]miDfYgg

G\UfdYžH"f&\$\$({"``hYReZd daVTZR] RS`feR\_73>!6 VRTYVc15H9GC@BGK AU[Un]bYfCb`]bY IBGK Ami7ci fgYŁ

JUYŽ9"'f&\$\$&{" YV 73>!6 TR]Vd R\_U eYV 6 cRW27\_X]ZdY)Ž#" j]]RSf dž89HžF mXY fC b`]bY IBGK 'A m 7 ci fgYŁ

#### FYWca a YbXYX FYgci fWYg

D`YUgY`ZJbX`fYgci fWYg`Zcf`f\]g`Wci fgY`cb`A ccX`Y"

#### 7 ci fgY 9j U`i Uhjcb UbX 8Yj Y`cda Ybh

- Ghi XYbhZYYXVUW\_']g`[Uh\YfYX'h\fci [\ci hh\Y'Xi fUh]cb'cZh\Y'Wci fgY'Ug`ghi XYbhg'UfY'YbWci fU[YX hc'Ya U]`'Ubmei Ygh]cbg#ZYYXVUW\_']b'fY`Uh]cb'hc'h\Y'Wci fgY'UbX'Uhh\Y'YbX'cZh\Y'Wci fgY'h\fci [\'h\Y a mYI dYf]YbWY'gi fj Ym
- DfYj ]ci gʻWc\cfhgʻ\Uj YʻbchYXʻh\Uhih\YfY`]gʻbchYbci [\`h]a Y`[]j YbʻhcʻWca d`YhY`[fci d`k cf\_UWnjj ]h]YgʻXi f]b[``hi hcf]U`gʻUbXʻUgʻUʻfYgi `ha cfYʻh]a YʻZcf`[fci dk cf\_`UbXʻX]gWigg]cbʻcbʻk YY\_`m fYUX]b[gʻ\UgʻVYYbʻWcbg]XYfYX
- H\Y'hi hcf]U'g'\Uj Y'U'gc'VYYb'Z fh\Yf'UX^ ghYX'hc']bWi XY'U'a cfY'dfUWgWU'zghi XYbhWYbhfYX UddfcUWX'Vm']bWi X]b['UXX]h]cbU`'WUgY'ghi X]Ygz'fYgci fWY'WfYUh]cbz'dfc[fUa a ]b['UbX'a cXY``]b['cZ ghfUhY[]Yg'a Ybh]cbYX']b''YWi fYg
- H\]g'WcifgY'aU]b`m'WUhYfg'hc'ghiXYbhg'k\c']bhYbX'hc'hYUWX'95@#8'`YUfbYfg']b'5ighfU`]Ub'GWXcc`g

# Gi Va ]gg]cb cZ5ggYgga YbhHUg\_g

# Hi fb]h]b Gi Va ]gg]cb

Zmci YbWci bhYf'U'dfcV'Ya 'k \Yb'UhYa dhjb[ 'hc'gi Va ]hmci f'Ugg][ ba YbhN fci [ \ 'Hi fb]hjbžd'YUgY hY'Yd\cbY'9I hYfbU'`Gi ddcfhcb'-', ) '' ' '%cf'Ya U]`'h\Ya 'cb'YI hYfbU'hY'hgi ddcfh4 i bgk "YXi "Ui '"'Gi ddcfh \ci fg'UfY', .\$\$Ua '-'%\$.\$\$da 'cb'k YY\_XUmg'UbX'-.\$\$Ua '-') .\$\$da 'cb'k YY\_YbXg'fl \*) 'XUmg'U'mYUfŁ''Zmci UfY'i bUV'Y'hc'gi Va ]hmci f'Ugg][ ba YbhXi Y'hc'U'ZJi 'hk ]h. 'Hi fb]hjb'mci 'a UmUdd`mZcf'Ub'YI hYbg]cbž'Vi hmci a i ghfYhU]b'mci f'hjW\_Yhbi a VYf'Zfca '9I hYfbU'`Gi ddcfhfU'cb[ 'k ]h. 'Ubmch\Yf'fY'Yj UbhXcW a YbhgŁ'hc ]bWi XY'Ug'Yj ]XYbWY hc'gi ddcfhmci f'YI hYbg]cb'Udd`]WUh]cb'''Zmci 'Ya U]`'9I hYfbU'`Gi ddcfhimci 'k ]`` Ui hca UhjWU'`mfYWY]j Y'U'hjW\_Yhbi a VYfž'Vi h']Zmci 'hY`Yd\cbY'mci 'k ]``bYYX'hc'gdYW]ZJWU``mUg\_'Zcf'cbY" Hi fb]hjb'U`gc'dfcj ]XYg'i dXUhYg'cb'h\Y]f'gmghYa 'ghUh'g'cb'Hk']hYf"

; YbYfU``mžUggYgga YbhiHUg\_gʻa i ghVYʻgi Va ]hhYXʻY`YWfcb]WU``mj ]UʻY]h\Yf`Hi fb]h]bʻcf`UʻA ccXʻY Ugg][ ba Ybh'`±o`]bgHUbWfgʻk \YfY`h\]gʻ]gʻbchidcgg]VʻYž`]hk ]```VY`gHUhYX`cb`mci f`Wci fgY'gʻA ccXʻYʻg]hYʻk ]h\

## 5WUXYa ]W<cbYghmUbX D`U[ ]Uf]ga

D`U[]Uf]ga `]g`i g]b[`H\Y`k cfXg`cf`]XYUg`cZcH\Yfg`UbX`dfYgYbh]b[`H\Ya `Ug`mci f`ck b"`=h\WUb`HU\_Y`a Ubm Zcfa gžZca `XY`]VYfUHY`W\YUH]b[`Hc`UWW]XYbHU``mWcdm]b[`Zfca `U`gci fWY`k]H\ci hUW\_bck `YX[Ya YbH'

#### I BGK '[fci dg'd`U[]Uf]ga ']bhc 'h\Y'Zc``ck ]b[ 'WUhY[cf]Yg.

7 cdm]b[.:1 g]b[`h\Y`gUa Y`cf`j Yfmg]a ]`Uf`k cfXg`hc`h\Y`cf][]bU``hYI h`cf`]XYU`k ]h\ci hUW\_bck `YX[]b[`'h\Y gci fWY`cf`i g]b[`ei chUh]cb`a Uf\_g"`H\]g`]bWi XYg`Wcdm]b[`a UhYf]U`gž]XYUg`cf`WcbWYdhg`Zca `U`Vcc\_ž'Ufh]WYž

### 5WUXYa]W=bZcfaUh]cb

8iY'hc'Yjc'j]b['UXj]WY'VmBGK '<YU'h\žghiXYbhg'aigh'W\YW\_'Zcf'idXUhYX']bZcfaUh]cb'fY[UfX]b['cb`]bY 'YUfb]b['Zcf'U``5fhgž'8Yg][b'UbX'5fW\]hYWhifY'WcifgYg'h\]g'hYfa'f]]U'AccX`Y'cf'WcifgY']bZcfaUh]cb dfcj]XYX''Ł

: cf<sup>\*</sup>YggYbhJU<sup>\*\*</sup>gh XYbh<sup>\*</sup>]bZcfa UhJcb<sup>\*</sup>fY<sup>\*</sup>UhJb[<sup>\*\*</sup>hc.

- fYei Yghg Zcf Yl hYbg]cb/
- `UhY`gi Va ]gg]cbg`[ i ]XY`]bYg/
- fYj ]Yk 'cZa Uf\_g/
- I BGK '<YU`h\`UbX'GUZYhmidc`]WjYg/
- YI Ua ]bUh]cb'dfcWYXi fYg/
- •