

**Session  
VS012**

## *DCL Lexicals: OpenVMS Jujitsu*

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## *Introduction*

*What can DCL Lexical  
Functions do?*

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## *Symbols vs. Logical Names*

*Symbols: Local to DCL*

*Logical Names: Local, and various  
flavors of global, used by RMS*

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## **NOTES**

## Symbol Assignment

**`==` Assign Value**

**`:=` Assign String**

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## Assigning Symbols

**`X = F$ENVIRONMENT("DEFAULT")`**

**`X := " " F$ENVIRONMENT("DEFAULT")' "`**

**`X = F$ENVIRONMENT("DEFAULT")`**

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## NOTES

## *Differences between Logicals and Symbols*

*Use Symbols from DCL only  
Use Logical Names to pass  
parameters and file pointers*

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## *Key Functions:*

*Get Environment Info  
F\$ENVIRONMENT  
Check Privileges  
F\$PRIVILEGE  
Translate Logical Name  
F\$TRNLNM  
Get current time of year  
F\$TIME  
Convert Time  
F\$CVTIME  
Get Message  
F\$MESSAGE  
Format Message  
F\$FAO*

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## **NOTES**

## *Key Functions (continued):*

*Get Job/Process Information*

***F\$GETJPI***

*Get Queue Information*

***F\$GETQUI***

*Get System Information*

***F\$GETSYI***

## *Get Environment Information (F\$ENVIRONMENT)*

***F\$ENVIRONMENT("DEFAULT")***

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## **NOTES**

*Verify Privileges  
(F\$PRIVILEGE)*

*F\$PRIVILEGE("priv list")*

*Translate Logical Name  
(F\$TRNLNM)*

*F\$TRNLN(name, table, index, mode,  
case, item)*

**NOTES**

## *Get Current Time (F\$TIME)*

***F\$TIME()***

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## *Convert Time (F\$TIME)*

***F\$CVTIME(input, output, delta)***

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## **NOTES**

## *Get Message from Message Facility (F\$MESSAGE)*

***F\$MESSAGE(message-number)***

## *Formatted ASCII Output (F\$FAO)*

***F\$FAO(string, parm1, parm2, ... , parm15)***

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## **NOTES**



## *Get Job/Process Information (F\$GETJPI)*

*F\$GETJPI(pid, item)*

*Examples of item: MODE, RIGHTSLIST*

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## *EXIT command*

*Always use the EXIT command.*

*If successful, specify  
completion code (SS\$\_NORMAL = 1)*

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## **NOTES**

## *Sample Problem:*

*Check if user has required privilege level. If not, issue fatal error  
SS\$\_NOPRIV*

*This is very useful when writing  
command procedures*

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## *Sample:*

```
$ PRIV_OK = -  
  $PRIVILEGE("CMKRNL,SYSPRV")  
$ IF PRIV_OK .EQS. "FALSE" -  
  THEN $ EXIT(%X24)  
$ EXIT(%X1)
```

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## NOTES

## *Sample Problem:*

*Check if user has specified identifier  
If not, exit*

*This is very useful when writing  
command procedures*

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## *Sample:*

```
$ RIGHTS = ","+  
  F$GETJPI(0, "RIGHTSLIST")-  
  +","  
$ IF F$LOCATE(",CHOCOLATE,",  
  RIGHTS) NE-  
  F$LENGTH(RIGHTS) THEN $ EXIT
```

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## **NOTES**

## Sample Problem:

*Validate User entered option and transfer to required processing routine*

## Sample:

```
$ VALIDOPTIONS = -  
  "|ADD|DELETE|MODIFY|EXIT|"  
$ IF F$LOCATE(VALIDOPTIONS,  
  "|"OPTION"|") NE  
  F$LENGTH(VALIDOPTIONS)  
$ THEN  
$   CALL PROCESS_ 'OPTION'  
$ ELSE  
$   WRITE SYS$OUTPUT -  
     ""OPTION' Invalid Option"  
$   ENDIF
```

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## NOTES

***There are no limits on what you can do with DCL Lexicals, the only limits are your imagination and inventiveness.***

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## ***Goal:***

***Use DCL Lexical functions to permit useful, conceptually consistent extensions to OpenVMS***

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## *Questions?*

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