2/100	Unit - 5
	Using PL/SQL Rulages 2 Page No.
	What is a Package?
	The state of the s
?	A partage is an Oracle object which holds other
	objects within it. Objects commonly held within a
	objects within it. Objects commonly held within a package are procedures functions cursors exceptions
	variables and constant. It is a way of creating
	generic, encapsulated rousable port.
	A package once returned and debugged
	stored in Oracle system fable and all the wers
	who have the encube permission can encute the
	parkage.
X2	Advantages of Packages:
	Advantages of laxages:
	Packages enable the organization of commercial
	applications into afficient modules can partage is
	osily understandable and the intertaces between
	as I as simple dear and well-defined
-	Packages allow greating of different previlages
	Packages allow granting of different prientages  for different user groups more efficiently.  A package's public variables and cursors are
-	A jarkæge's public variables and cursors are
	available to the entire lackage and can be small
	by all the elements of the package. This concept
	utilizes the removy more efficiently.

1		Page No. Date:
,		Packages enable the overloading of procedures
,		and function if necessary.  Packages improve performance of the system
/	- Jan 1	line multiple offers due to the
(	-	Packages promote the code greuscebility. Therefore greducing gredundant coding.
n'	100 Mg	0 10 000 000000000000000000000000000000
		Justions and wasers that can be called from anywhere
	IN A	Sale ma Shear Shear as he was a solly and the
Į,		Components of Parkage:
		An oracle package normally consist of two components
<b>%</b> _		as parkage specification and parkage body.
	(1)	Paikage-Specification:
	Flags	A parkage specification delavres
	1 2 5	all the objects used within a package It mainly includes variables of necessary types memory variables.
_		procedure that are available for use.
	Auto	he package specification contains:
	ا (ر دو	Some of the package.
	2.	Name of the datatypes of augument. The declaration of all procedure, function of

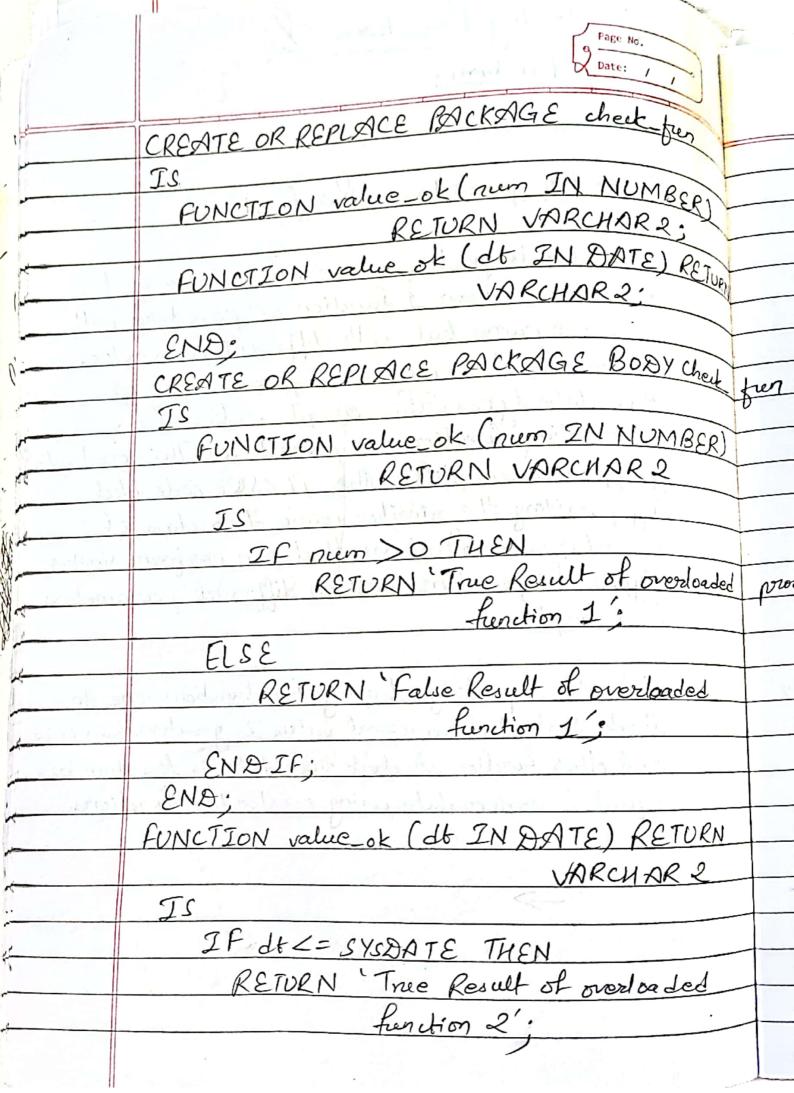
	2 Onte: / /
	which are accessable from anywhere in the
	packago.
	Syntax:-
	The state of the s
	CREATE BICKSIGE package Name
	Jest Jest de la constant de la const
	declarations.
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A	END packageHane;
1. 1. 2. 21	much and they in it is to the said to the said to the said
4	for eg.
1	De simple package declaration consisting of
	a function and procedure will be as:-
	CRO-0.70 0.0011-000
Y	CREATE PACKAGE emppack
	IS TO A TOTAL ALLANDED
	FUNCTION Chock-emplesso IN NUMBER;
	PROCEDURE inc_sal (eno IN NUMBER post IN VARCHAR);
	END emppack;
1 1 2	

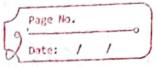
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,		Partago Body:
•		
		delinitions of public objects that have
/		definitions of public objects that have been deslaved in the package specification. The body can also
ı		in the package specification. The body can also contain other objects declarations that are private to
1		other objects declarations that are private to the package. The object declared privately in the
,1		package. The object declared privately in the
1		list alog of the
5		object outside of the package.
		The package bedy also contains definition of the subonogram.
,		the subprogram.
, -		After a package is netword debugged compiled and stored in databouse and stored
14-		compiled and stored in databouse application users
- 6		Will promissions cell cell us suco-nycogrami
Ø-	1000	courses or graise is enceptions. A package body
<b>8</b> -		created as.
		CREATA ARRIVA
-		CREATE OR REPLACE PACKAGE BODY
_		packageNane
-		IS MA LONG MARINE MONTH MAN
_		declarations
-		Britishes) to as in Succession
-	E BANK	definitions:
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_		
	11	Construct with Construction

	Page No.  Date: / /
	Pozeg:
	CREATE OR REPLACE PACKAGE BODY
	omp-pact
5.6	DIS and what all along the
	FUNCTION check emp (eno IN NUMBER)
	RETURN NUMBER
3	Is no short all a way of the
	body of the function:
	EN3.
	PROCEDURE inc_sal (eno IN NUMBER
	post IN VARCHAR)
	IS
	body of the procedure;
	END;
	END emp-pack;
٠.,	
	Public & Private Objects:-
	The sub-programs, cursors, variables and
	constants declared inside the package body are
	private and such private objects are only accessed
	e within the same package and cannot be accessed
	in PL/SQL block outside the package, Such
	ir PL/SQL block outside the package. Such private objects are used for internal calculation
	ll 1

	Page No.
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	purpose of any package.  Any subprograms cursors variables are constants declared within package specific
	Any subprograms cursors variable
V	constants declared within package specifican
	and the sublic spice by blic spice a freeton
	are the public objects lublic objects become
( -	1 Sell on
	the the passage factor pagers are
	memory. To access public-objects outside the
	1
	parkage we use:
	package Name . object Name statement
	Charlet Standard Long
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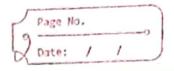
PY	Overloading Procedures &
SOL	Overloading Procedures & Page No.  Frenchions.
A Part of the State of the Stat	
1243	Overloading procedures & functions:
	STREET, MINUTES
LY D	In Oracle package we can declare and
	define more than I function or procedure with
	the same name but with different parameters
(	interms of either number of parameters or
	their data types. This concept is known as
(125)	overloading functions or provedures. This overloadin
	a approach simplifies the PL/SQL code block
	by providing the similar name to a class of
	pococedures or functions that can perform similar
1	types of operations but on different parameters.
	for example.
	$\rho$
- 5 st	Create a package having two functions, one to check that the numerical value is greater than zero
	check that the numerical value is greater than zero
	and other function to check that date is less than or
	equal to system date using overloaded functions.
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		Date: / /
		ELSE
		RETURN False Result of overloaded function2;
		ENDIF;
		ENO;
		END check-fun;
		ralaso
	*	What are the advantages of enorloading sub-
2017		What we the advantages of overloading sub-
<u>w</u> 1		Procedure &
	*	Considering a database having Emp & Dept
		Tables. Define a package having one function that
		Tables. Define a package having one function that fakes employee number as input and increase
		the salary of that employee by 10%. Another
More	dur	function that takes post as input and increase
10-		the salary of all employees of that post by 5%
		A procedure that takes post as input and
		displays the total number of employees in that post.
	To a second	post.
		Part of the state
	7.	
al C		
		16

## PL/SQ Product Specific Packages Oracle and various grade fools are with product specific packages that define other programming environment Few commonly DBMS\_ALERT: This package allows database triggers and application programs to display certain types of errors or warring mescages when transactions are executed and they perform some WRITE operations on database. The alors are transaction based and they operate independently. DBMS\_OUTPUT:-This partage allows us to display output from PL/SOL programs or subprograms fest the program. The method put\_line () which used to display some message on



DBMS\_PIPE:

A pipe is an area of memory used This parkage allows different sessions to communicate over different pipes. This package is useful in various operating systems to interact with highlevel language programs

UTL-FILE:-

This parkage allows PL/SQL program s to great and write operating system text files. It provides different file related operations like () CLOSE() etc. to interact with files for various neading and writing operation

UTL-HTTP:-

This parkage allows PL/SQL programs to make hyper text transfer protocol callouts that means it can retrieve data from the internet or ORACIE web server as well as can provide data to them. It enchanges data

