

معابنة cg.. a prcnut rccelved nuy conmist of data itcms policy numntet and aoxunt. but nny eist xeveral
tines for oe poliey. ach ocutenee ofadata item will have vpecife value (for evampie tie wabus of
premiun wount' my he '¥91 25" or the vnluo of vehiele type' may he 'alon eurl; theaewlues will be
rpesentadl in a suitable code. these logical data units can be tunsferred fairly cusily fom the clerical
example to onc where programs. DBMS, and direet access storage replace the mamger, filing clerk. and
iling eabinebs. Pwugruns nay repue¥t mn wxeurente uf a SLET by providing eitner i pnmury or u
xcondlary key (the primary key of a member rcorl). A nutnber of Syate aalyais wd desigN Dr. Ai Alyaaree
Wasit Univer-iy- coupulet aeieace wod tT tueuy RECORDS will hen he rerieved for the pmgram. which
will manipulate the DATA ITtMS unl DATA AGGREGATES wun therein lhyseal chtabase unit input to
and output from the cental ocessor in a computer t¥stem is accomnplished by a wunmand whish ewues
a secundar¥ storage Jevice to be reud lmom oae indicator ol noker, and the duta thus found uansfered
to main mcmor¥y- In the case ot 1 mugneti mape, the indiewnrs will be imter shek gaps: in the euse af
magnetie dliks or dlnums, the irndicantors will be anlilress tarher. All he ddata reconled between thee
indie-tar form a phy sieal neorl sometinea known a a bloek or sestor. A PAGE may be ome or mare of
these (eontiguous) physical rcotds.la practice. i is unhkely that a page will he looger tuan a tok of a
magnetic disk, and چ houl be poisible to perform a multiple physial rxcord reud in a shont tinc to rctrieve
puge. Where itis possible to vury the size of phyiael recoeds in a computerwystem. positive
perturmnee xhvantage will be pined by miking the page 2e exaetly ewwal to the pyseal reunl se. A
puge cun eontain u number of reeonls. and a reeurd can spun mre nan one page. There may he
different reenrd rypes to " puge heemre there is no retictinr m menrpage rehtiomship ARFA is simply a
eolleeton of pages, nomally contigunuis. There is no need for an as1 to be reticted to disk pack. e¥linder
oF tuck boundares. as an alca wil consist of 1 multiple of pages. The specitication of areas provides a
mcanns of physically scgmenting s2eoondury ¥orngc: the puge is ¥enerally that pan of an irea which is
rend into ntain orige MeveFy PU or put comman. k is the job ot mh DEMS t mateh requsk tom
proganns forset or nocord oreurenees and page ideniners (This is the COpASYI- appronch. othner
appmaches are diftcent in delail.) The database upprouch enables the introduction of the concepts of
VIRIUAL ht and TRANSPARENT datu: VIRTUAL dat is the tern siven to dutu item types whose values
are ealeuluted fmin other torl la items anl presenteu to a pgram only when they ure resued by that
pogram. TRANSPARENT Jutdl is the Sytem analyeas and deiyn D.Ai Alydare Wari Uetversty- cutpw¥er
cienee -d T facahy مشاركة المنطقة حذد التخطيط