Toy DB Project Report Finall

Raid5 : there are distributed parity block among all disks .so every 2 disk is enough for data operation.

In raid5 disk management RAID 5 will convert each write into two reads followed by two writes,like 4 read IOs per eatch host so performance will be ~1/4 but the read operation has same performance like single disk because one raid IO for every host IO.

Performance :>

if the single disk or raid0 performane for single disk is k IO/second .

suppose write x then read 100-x ,and when x=0 ,performance =k.

performance ~= k\*(100-x)/100+(k/4)\*x/100;

Implementation :

To calculate the performance of raid5 disk we have created a virtual disk class with variable Platers ,Tracks and Sectors and Blocks .we are assuming thing that every sector has single block or block seeking time is negligible .

We have assumed that raid 5 disk data write latency and read latency .we also assumed track seek time.and there is no error occurs if occurs we have to add some error correction time for every error correction assumed.

To identify disk number ,platers number, track number and sector number ,we are using reminder of address with their count . or can be used other algorithm .

after obtaining above parameters particular header seeks for track and sector .

so this operation time is track seek time+ sector seek time. this time is return by total\_time\_read(…) and total\_time\_write(…) function of Disk class.these function keeps track to last their position so they can determine track seek time .we have assumed next track time and header can move both side but disk only one .