PLet 1 byte = 8 bits they

16 byte = 128 bits  $4 \times 32$ -bit = 128 bits

There fore fore for 32-bit integers in stored in a

16-byte cache line

(a) for (I=0; I < 8000; I++)

for (J=0; J<8; J++)

A[J][J] = B[J][0] + A[J][J];

Temporal locality;

This is refers to the tedency for a processor to access memory location that have been used recently. For example, when an iteration loop is executed, the processor executes the same set of instructions repeatedly

a) for (I=0; I < 8000; J+4)

for (J=0; J < 8; J+4)

A [J][J] = B[J][0]+A[J][+];

Spatial locality-

This is refers to the tedency of execution to involve a number of memory locations that are clustered. This reflects the tedency of a processor to access instructions spanentially.

Spotal Location also retears the tendency of verticets when processing verticets the tendency of verticets when processing verticets the tendency of verticets when the verticets and verticets the tendency of verticets and verticets and verticets and verticets and verticets the tendency of verticets and verticets are verticets and verticets and verticets and verticets and vertic

Spotal locality & A[I][I]

for (J=1:8000)for J=1.8A(I,J)=B(J,0)+A(J,I); end end

This is refers to the tedency for a processor to access memory locations that have been used recently. For example, when an intention loop is executed, the processor executes the same set of instructions repeatedly.

Temporal locality: I, J, B(J,0)

E for J=J:8for (J=J:8000) A(J,J)=B(J,0)+A(J,J); end end

(d) Tempoval locality: I, 3

e) For (J= 1:8000) for J=1:8 A(J,J)=B(J,p)+A(J,I)end. Step 2 Spotial locality This is refers to the tedeury of execution to Involve a number of memory locations Hostane clustered. This reflects the tedency et a processor to occess instructions sequentially . Spatial Location No western retlects the tendency of a program to occess data locations sequentially, such as when processing a table of data therefore to the spetial locality is Spetial locality = A(I,J), A(J,I), B(J,O) fr(J=1.8000) A(J,J)=B(J,0)+A(J,J)for J=1:8