Question 1
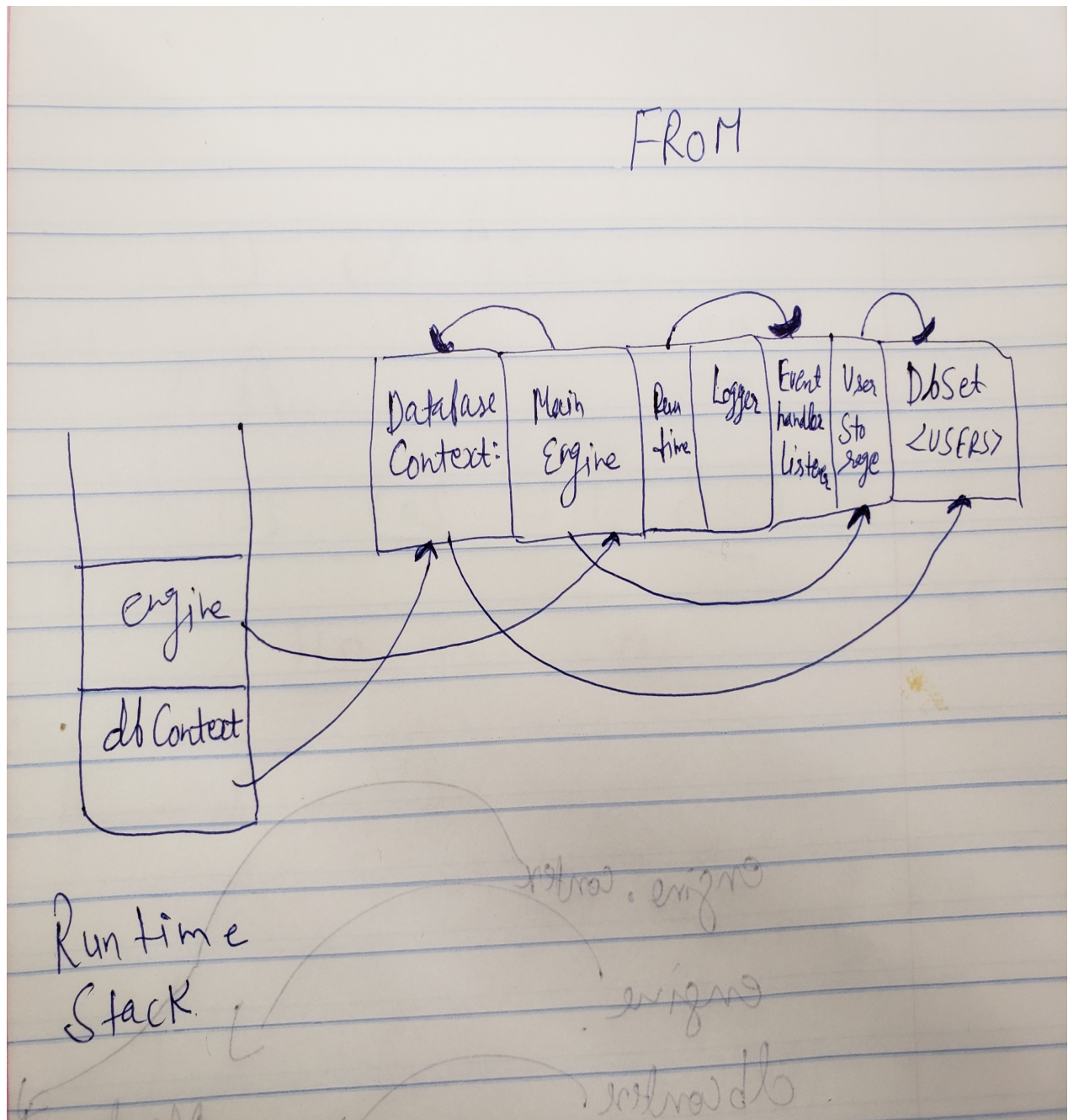

Figure 1. Before GC, From Space
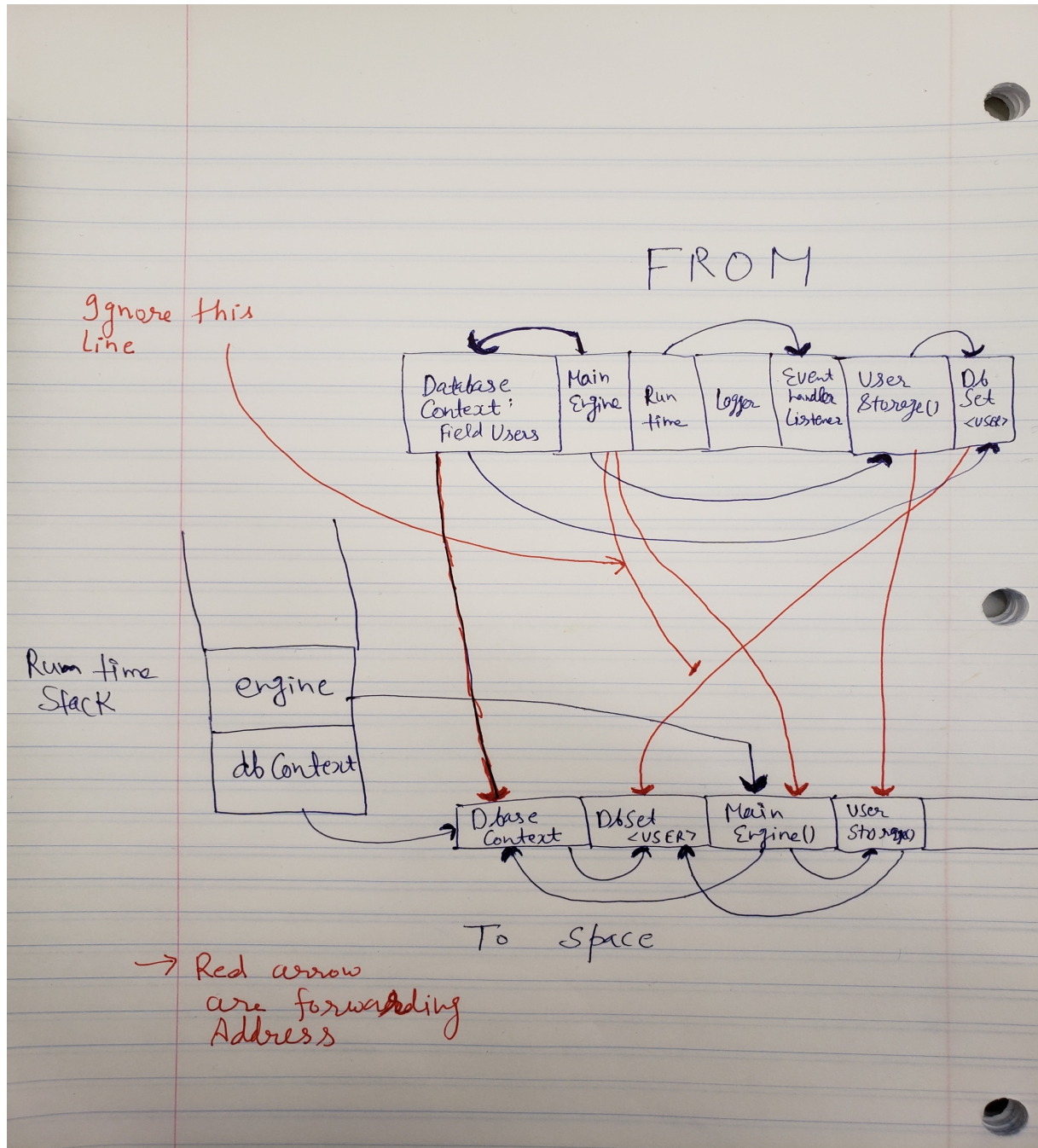
Figure 2. After GC, To Space

Roots objects are **Engine** and **DbContext**
Live objects are **Dbase, DbSet<Users>**, **Main Engine**, **User Storage**
Dead objects are **RunTime**, **Logger** and **Event Handler Listener**

Assumptions:
When **context.Users.FirstOrDefaultAsync()** is called it creates object of **DbSet<Users>**.

Points

DbSet<Users> is initilzied using lazy loading because of virtual keyword.

EventHandlerListener object subscribed to an event generated by ready. This refers to memory address where a sub program is placed. This sub program would execute when event.

RunTime is passed to async Run Async. This would not be stack as there is no reference to it.

References:

https://docs.microsoft.com/en-us/ef/ef6/fundamentals/working-with-dbcontext

https://docs.microsoft.com/en-us/dotnet/csharp/programming-guide/events/how-to-subscribe-to-and-unsubscribe-from-events