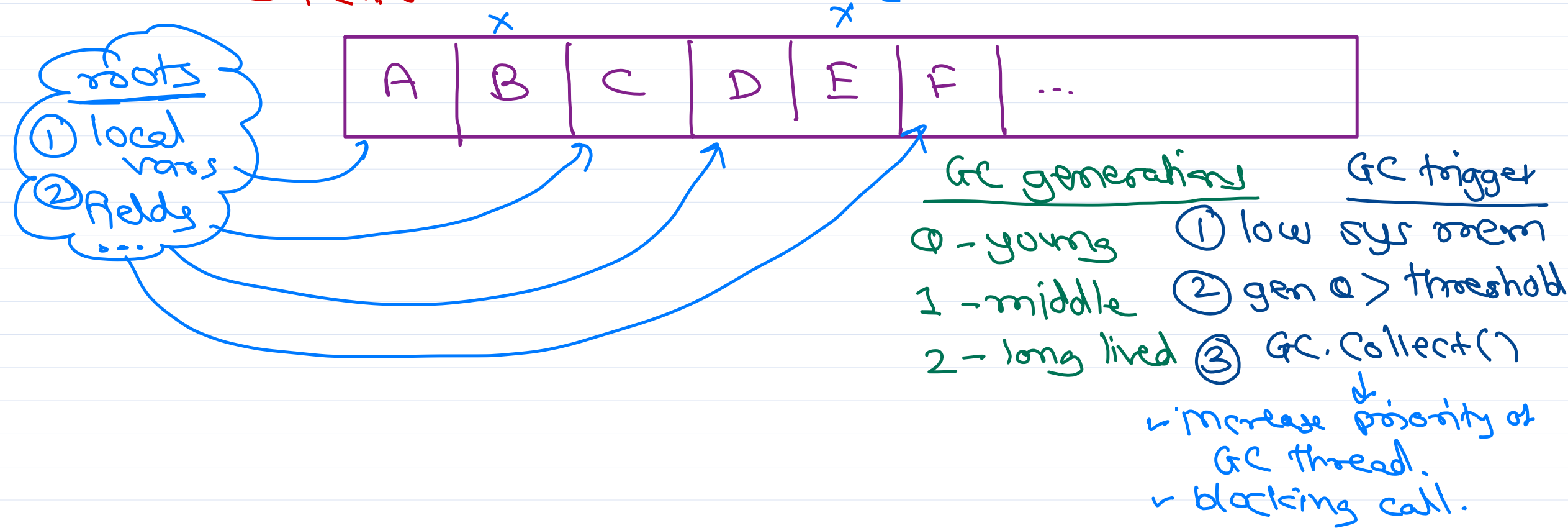# C#.NET @ Sunbeam Infotech

Trainer: Nilesh Ghule

Garbage Collection

CLR → auto mem management

programmer → new obj allocation → heap ← managed heap

garbage Collector → auto mem release of unref objs

← mark + Finalize() + reclaim

roots
1. local vars
2. fields
...

A | B | C | D | E | F | ...

GC generations

0 - young
1 - middle
2 - long lived

GC trigger

1. low sys mem
2. gen 0 > threshold
3. GC.Collect()
   ↓
   → increase priority of GC thread.
   → blocking call.

Metadata & Reflection

assembly

PE header
Manifest
Type Metadata
IL
Resources

Type object

① obj . Get Type ()
② typeof (type)
③ Type . Get Type ("cls");

Metadata of all types (public/non public)
For each type:

① name + type (class, struct, enum, interface, delegate).
② base class
③ interfaces
④ access specifier + flags
    (is abstract, is static, is sealed, ...)
⑤ Constructors
⑥ methods
⑦ properties
⑧ fields
⑨ custom attrs

→ Class members.

ConstructorInfo
FieldInfo
Method Info
↳ Property Info

member's metadata

① name + type
② access specified + flags (sealed, abstract, static, override, ...)
③ params
  ↳ Parameter Info
    ↳ name, type, flags
④ return type
⑤ ...

Thank you!

Nilesh Ghule <nilesh@sunbeaminfo.com>