CS 241
Data Organization
Quiz 4

March 7, 2018

Question 1

```
void main(void)
{
   int x=1, y=3;
   int *px;
   px = &x;
   printf("%d\n", *px + y);
}
```

The output is:

A 1

B 2

C 3

D 4

E 13

F A memory location which is a larger number than the other options.

Question 1

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}
```

The output is:

A 1

B 2

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D 4

E 13

F A memory location which is a larger number than the other options.

Question 2

```
void main(void)
{ int a[] = {22,33,44,55,66};
  int *x = a;
  printf("sizeof(int)=%lu ", sizeof(int));
  printf("x=%p, x[0]=%d\n", x, x[0]);
  x = x + 4;
  printf("x=%p, x[0]=%d\n", x, x[0]);
}
```

If the first printed line of this program is
`sizeof(int)=4 x=0x7fff3df6d4b0, x[0]=22`
what is the second line?

A `x=0x7fff3df6d4b4, x[0]=66`

B `x=0x7fff3df6d4b4, x[0]=56`

C `x=0x7fff3df6d4c0, x[0]=55`

D `x=0x7fff3df6d4b4, x[0]=55`

E `x=0x7fff3df6d4c0, x[0]=66`

Question 2

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void main(void)
{ int a[] = {22,33,44,55,66};
  int *x = a;
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D `x=0x7fff3df6d4b4, x[0]=55`

E `x=0x7fff3df6d4c0, x[0]=66`

Question 3

a.out 01010202

```
void main(int argc, char *argv[])
{
  if (argc == 2)
  {
    int n = 0;
    char *c_pt = argv[1];
    while (*c_pt)
    {
      if (*c_pt < '0' || *c_pt > '1') break;
      n = n*2 + *c_pt-'0';
      c_pt++;
    }
    printf("%d\n", n);
  }
}
```

A 6

B 01010

C 10

D 101

E 5

Question 3

a.out 01010202

```
void main(int argc, char *argv[])
{
  if (argc == 2)
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      if (*c_pt < '0' || *c_pt > '1') break;
      n = n*2 + *c_pt-'0';
      c_pt++;
    }
    printf("%d\n", n);
  }
}
```

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C 10

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Question 4

```
int main(void)
{ char a[] = ‘‘computer’’;
  char *x = a;
  printf("sizeof(char)=\%lu ", sizeof(char));
  printf("x=\%p, x[0]=\%ld\n", x, x[0]);
  x = x + 3;
  printf("x=\%p, x[0]=\%c\n", x, x[0]);
}
```

If the first line printed is: `sizeof(char)=1`
`x=0x7ffd005b8d40, x[0]=c`
what is the second printed line?

A `x=0x7ffd005b8d43, x[0]=p`

B `x=0x7ffd005b8d43, x[0]=m`

C `x=0x7ffd005b8d50, x[0]=p`

D `x=0x7ffd005b8d50, x[0]=m`

E `x=0x7ffd005b8d40, x[0]=u`

F `x=0x7ffd005b8d40, x[0]=o`

Question 4

```
int main(void)
{ char a[] = ‘‘computer’’;
  char *x = a;
  printf("sizeof(char)=\%lu ", sizeof(char));
  printf("x=\%p, x[0]=\%ld\n", x, x[0]);
  x = x + 3;
  printf("x=\%p, x[0]=\%c\n", x, x[0]);
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